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XXVIII.—*The Birds of Gran Canaria.*

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(Plates IX.–XII.)

The island of Gran Canaria is situated approximately in latitude 28° N., longitude 15° 30′ W., and is noteworthy chiefly on account of its equable and delightful climate. Moreover, it has lately grown to be a most important shipping centre, large numbers of vessels calling at Las Palmas on their way to and from the south. In consequence, many people winter there every year, and to an ornithologist the island is full of interest. During the many weeks which I have spent there annually for the past five years, I have devoted almost all my time to studying the birds and to making a representative collection for the Natural History Museum. The results of my observations and those of former naturalists who have visited Gran Canaria are contained in this paper. Although much has appeared in 'The Ibis' on the birds of the other islands of the group, yet Gran Canaria has been almost entirely neglected. The only article * dealing with the ornithology of this island as a whole was published by Herr von Thanner, on the results of a collecting-trip made by him in 1909.

In shape the island is almost round, and covers an area

* 'Ornithologisches Jahrbuch,' xxi. 1910.

of 635 square miles (by the planimeter); the distance from north to south is 34½ miles and from east to west 29 miles. The nearest point of Tenerife is distant 37 miles and that of Fuerteventura 50 miles. On the east coast undulating plains roll up from the sea to the "Cumbres," which take up the greater part of the interior and, viewed from the sea, give the island a very mountainous appearance. Los Pechos, the highest ridge, is 6400 ft. high, and the Roque Nublo, 6110 ft., appears as an isolated pillar of rock about two miles to the northwards. Deep barrancos, which run from the coast far into the heart of the mountains, split up the island, and, indeed, some of these ravines are truly immense, notably the Barrancos de Tirajana, Fatarga, de la Virgen, and Tejeda (de la Aldea)—the last-named when seen from the coast appearing to divide the island into two parts. The "Isleta"—the northern portion—appears as a detached conical islet separated from the mainland by an isthmus composed largely of drifted sand.

The accompanying map (Plate IX.) which I have prepared will shew the various expeditions that I have made and the localities in which birds have been collected.

For the convenience of those who are not acquainted with Gran Canaria, I have split up the island into six Divisions, which are all more or less clearly defined :—

Division I.—*Monte and The Vega.* (Cultivated districts in the north.)
Division II.—*The Cumbres.* Plate X. fig. 1. (The mountain range in the centre of the island.)
Division III.—*The Pinar.* Plate X. fig. 2. (A large tract of pine-forests covering the mountainous country in the south and south-west.)
Division IV.—*Desert-like Plains.* Plate XI. fig. 1. (Including the sand-hills of Maspalomas.)
Division V.—*The Charco.* Plate XI. fig. 2. (The lagoons and swampy country found on the Maspalomas coast.)
Division VI.—*The Western Zone.* (The wild rocky country bordering the western coast-line.)

The members of the Fauna inhabiting these six divisions differ strikingly one from the other.


Isleta
Puerto de la Luz
LAS PALMAS
Arucas
THE MONTE
AND
THE VEGA
DIVISION I
Water Tanks
Golf Links
Caldera
B. de Guanarteme
San Mateo
Telde
Agaete
Galdar
Sardina
DIVISION VI
THE WESTERN ZONE
Pinar de Tejeda
Tejeda
B. de la Aldea
THE PINAR
DIVISION III
Pinar del Pajonal
Pico de las Nieves
Cuevas de las Ninas
CUMBRES
DIVISION II
Caldera de los Marteles
Ingenio
Agüimes
Mogan
DIVISION VI
B. de Mogan
Juan Grande
Euphorbia mariensis
Arguineguin
Maspalomas
Carrizal
Sardina
Reference
Route of expeditions
B = Barranco
Camp = Base camps
Pine forest
Heights in feet
Sketch Map
of
GRAN CANARIA
to illustrate the paper by
D.A. BANNERMAN, B.A. M.B.O.U. F.R.G.S.

Division I.—*Monte and the Vega.*

By this I mean the country which includes the villages of Tafira, Santa Brigida, San Matéo, Teror, Firgas, Moya, Arucas, and Tamaraceite. In these districts the soil is to a large extent under cultivation—bananas, sugar-cane, oranges, tomatoes, almonds, vines, and immense quantities of beans constituting the staple produce. Near San Matéo fine chestnut woods stretch for some distance up the slopes towards the Cumbres, and laurels are found in the neighbourhood of Santa Brigida, besides countless other trees of many species. In this zone two famous barrancos are situated, the one at San Matéo and the other at Firgas, where the vegetation is most luxuriant. Birds here are more plentiful, both in number and in species, than in any other district. Flocks of Goldfinches, Brown Linnets, Spanish Sparrows, and Canaries are always in evidence, added to which many species, such as the Tenerife Blue Tit, Common Chaffinch, Grey Wagtail, Rock-Sparrow, Berthelot's Pipit, Blackbird, Chiffchaff, and Blackcap, are ever present in varying numbers. In the neighbourhood of San Matéo numbers of Corn-Buntings are met with, and their hissing notes can be heard on all sides. Occasionally in the winter months small flocks of Swifts appear, but never remain for very long. Kestrels, Kites, Buzzards, and Egyptian Vultures frequent the hillsides and open valleys. Ravens often pass overhead on their way to the Cumbres, where they are plentiful. In the thick fields of beans Quail can sometimes be flushed; however, they are not very common and a good dog is almost essential when shooting them.

One of the rarest and most interesting species to be found in this zone is the Redbreast (*Erithacus rubecula superbus*): it frequents the most secluded spots, such as the deep barranco beyond San Matéo and the thick undergrowth which is found on the slopes above that village. Some large water-tanks are built on this ground, to which many land-birds and several species of waders resort.

I found Rock-Pigeons very numerous in the caves near

Guanarteme, and excellent sport can be had by waiting for these sporting birds as they fly from the country to their stronghold in the cliffs. In the Monte they are not nearly so plentiful as they are in the south of the island, where they literally swarm in thousands. In the summer months Swallows and House-Martins visit Gran Canaria in fair numbers; but they are seldom seen before July, and depart very soon, not remaining to breed. Owls (*Asio otus canariensis*) are rare; I have met with them at Tafira. The Barn-Owl is very scarce indeed, and I have never seen one in the flesh. The Hoopoe, in this part of the island, is rarely observed in any numbers in the winter, but later in the year is said to occur commonly in the garden of the Santa Catalina Hotel at Las Palmas.

Between the Isleta and the town of Las Palmas a curious tract of drifted sand is to be found, and beyond it a dry elevated plateau stretches towards Tafira. On this arid, sun-baked ground few birds are to be seen save Berthelot's Pipit, occasional flocks of the Trumpeter Bullfinch, the Short-toed Lark, and several pairs of the Norfolk Plover. Vegetation consists chiefly of *Euphorbia*, the three commonest species being *E. regis*, *E. aphylla*, and *E. obtusifolia*, besides various other desert-loving plants such as *Launæa spinosa* and *Plocama pendula*.

Division II.—*The Cumbres.*
(Plate X. fig. 1.)

As might be expected, in these mountain solitudes bird-life is remarkably scarce, and is chiefly represented by the Raptores: Vultures, Kites, Buzzards, and Kestrels all being very plentiful. When encamped close to the Roque Nublo in February 1911, at an altitude of 5000 ft., I was much struck by the many Rock-Partridges (*Caccabis rufa*) to be found at this height. On every side of the ravine they were calling one to the other, the birds silhouetted against the sky on the highest pinnacles they could find. While at this camp I noticed several large flocks of Canaries, and again when encamped still higher up on a plateau 5650 ft.

1. The Cumbres.

2. The Pinar.

West, Newman proc.

above the sea. Here also I met with a large flock of Corn-Buntings; and on one occasion while passing over table-land at 5000 ft. I flushed a pair of Coursers, although these birds are almost entirely confined to the desert country round Maspalomas in the extreme south-east corner of the island. Berthelot's Pipits are found everywhere in the Cumbres, generally in pairs. Hundreds of Rock-Pigeons make their homes in the caves, and as very few are shot they must be increasing enormously every year. Each morning, long before the mists had dispersed, we were awakened by the melancholy croakings of the Ravens as they flew over the camp. They breed in the high cliffs, but I was too early to find their eggs.

The panorama seen from the summit of the Cumbres is grand in the extreme, and a magnificent view of the snow-capped "Pico de Teide" is obtained. The highest peaks in the Cumbres are broken by large stretches of almost desert-land, parched by the sun and covered with loose stones and boulders. Vegetation is confined to the more sheltered barrancos, where certain bushes and grasses seem to flourish despite the character of the soil. The photograph reproduced, which was taken at an altitude of 5110 ft., facing the south-east of the island, gives a fair idea of the country and its rugged aspect; but it must be remembered that when once the summit of the Cumbres is reached progress is not at all difficult, and large stretches of almost flat ground are traversed before the descent is begun on the opposite side.

Division III.—*The Pinar.*

(Plate X. fig. 2.)

When the Cumbres are crossed the character of the country changes. Barren mountains and deep barrancos give way to fertile valleys and large tracts of pine forest, which stretch as far as the eye can reach towards the south-west coast. The largest of these forests is known as the Pinar Pajonal, and here I camped for a considerable time in 1910 and 1911, thoroughly exploring its depths and the bird-life contained therein. As can be seen from the photograph, the trees have

been severely thinned by the charcoal-burners, and in many parts utterly destroyed by the Spaniards in the most ruthless fashion. Undergrowth is practically non-existent, and the dead pine-needles on the parched earth made walking very difficult. These pines are the home of the very beautiful Blue Chaffinch (*Fringilla teydea polatzeki*), a subspecies of the form found on the Peak of Tenerife. All my notes on this interesting subspecies will be found under the heading of the bird itself. Most noticeable of all in these forests is the brightly coloured Great Spotted Woodpecker. These birds are very numerous and extremely noisy, making themselves heard at a great distance in the silent woods. Pigeons also are fairly common, but are very wary. One of the most attractive species is the Tenerife Blue Tit; these little birds roam through the trees in small parties, keeping up an incessant chatter as is their wont. Chiffchaffs are constantly heard, although Herr von Thanner affirms that he never met with any in the Pinar. I found Partridges occasionally on the outskirts of the forests; but they preferred the hot sheltered barrancos, where they were quite plentiful, especially in the neighbourhood of the Cueva de Las Ninas. At this spot, where I was encamped in 1910 and 1911, a large Barn-Owl was several times seen by one of the members of my party; on one occasion it alighted on the ground close to the tent, where it could be plainly seen in the brilliant moonlight. Unfortunately it was never obtained. Norfolk Plovers were heard calling at dusk, but were never seen in the daytime. Other species noticed in the Pinar Pajonal were Shrikes, Grey Wagtails, Berthelot's Pipits, Blackbirds, and Canaries, all of which were decidedly scarce. Ravens and all the Birds of Prey, on the other hand, were common. Besides Vultures, Buzzards, Kites, and Kestrels, Herr von Thanner mentions having seen a single Sparrow-Hawk in the Pinar close to the Cueva de Las Ninas. In my opinion this must have been a chance straggler, as I have never heard of another example. The same collector obtained a Redstart on the 27th of March, in the Pinar de Mogan, but this also is a rare migrant.

The Pinar Pajonal commences at about 3000 ft. above Puerto Mogan, and on the slopes above Juncal the path through the pines reaches an altitude of 4000 ft. Fresh water is to be found in abundance near the Cueva de Las Niñas, and several deep pools of icy water are hidden in the depths of the forest.

Division IV.—*The Plains and Sandhills.*
(Plate XI. fig. 1.)

From Carrisal to Arguineguin is to be found perhaps the most desolate country in the whole island, and in consequence bird-life is exceedingly scarce. Looking down from behind the town of Aguimes, an immense flat plain stretches out before us from Carrisal to Juan Grande. The long ride across this desert is monotonous in the extreme. The ground is strewn with loose stones and boulders, and in parts is fairly thickly covered with Euphorbia (of which Gran Canaria possesses eleven different species) and another shrub named *Plocama pendula*.

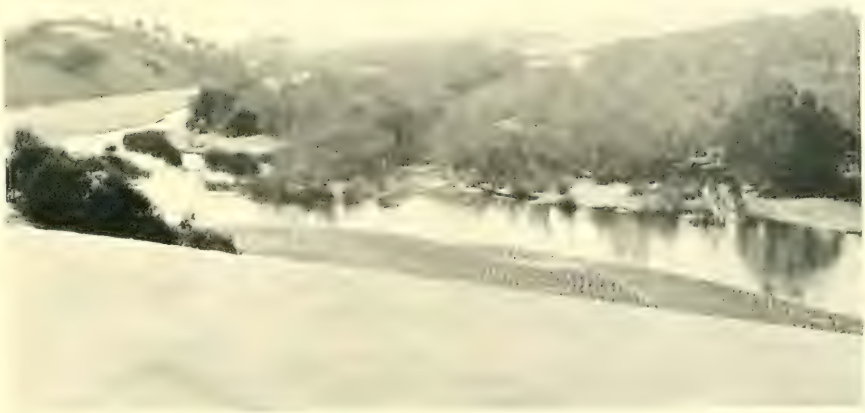
From Juan Grande, where a certain amount of cultivation has taken place, the plain continues much as before, save that giant *Euphorbia canariensis* is found growing abundantly. This district is said to be of great interest to geologists. Nearing Maspolomas the ground begins to rise slightly, and a considerable amount of drifted sand covers the surface. Throughout this entire waste birds are seldom seen—Trumpeter Bullfinches, Short-toed Larks, Berthelot's Pipits, and a few Vultures, Kestrels, and Ravens being the only species found. I had hoped to meet with some form of Desert-Lark in this part of the island, but in this I was disappointed. As we neared the "Charco" the route lay over an elevated plateau close to the sea on which were growing *Plocama pendula* and scattered clumps of Euphorbia bushes; this in turn gave way to sandhills covered with a scanty vegetation; several Norfolk Plovers were flushed as we passed through the belt of Euphorbia, but were never seen far from these bushes. The plateau and sandhills are the true home of the Courser, small parties of which were

to be seen in all directions. Trumpeter Bullfinches were present in small flocks and were remarkably tame. Other species noted were Ravens and Rock-Pigeons, the latter in immense flocks which do considerable damage to the crops.

Division V.—*The "Charco" of Maspalomas.*
(Plate XI. fig. 2.)

This "Charco" is utterly unlike anything else to be seen in any of the islands. It is best described by imagining a fertile valley bounded on the one hand by sandy dried-up plains and on the other by a stretch of barren sandhills, which together form a country quite unique in character. Fresh water running from the hills into this valley becomes dammed for about half a mile from the sea and forms a considerable swamp; the main stream always appears to be running, but on the right bank of this stream various arms of stagnant, or almost stagnant, water stretch into the tangled vegetation. This consists of tamarisk bushes, poplars, stunted palms, tarajal bushes, mounds of coarse spiky grass, and rushes. Two clumps of tall date-palms stand out above everything and lend an extra charm to the scene. Some of the lagoons and pools are very deep, the banks being thickly overhung with coarse grass which affords a perpetual hiding-ground to the few water-birds which are to be found here. At one corner of this "Charco," on the coast, is built the Maspalomas Lighthouse, and from the summit of this I mapped the country in the immediate neighbourhood. At high tide the sea runs up the main channel, which is then transformed into a comparatively wide stretch of water, but the salt water does not reach up the various lagoons. At low tide a considerable stretch of sand is left bare, much of it quicksand, and here innumerable waders may be found—the Ringed Plover, Sanderling, Dunlin, and Kentish Plover were all numerous in February, especially the Kentish Plover, which I am sure breeds in the vicinity. Whimbrels were occasionally noticed on the rocks by the light-house, and Sandpipers were found near the edge of the lagoons. At the time of my visit in February much of the marsh was dry, but after heavy rains in the hills the

1. Desert-like Plains.



2. The "Charco" of Maspalomas.

West, Newman proc

"Charco" must become a veritable lake and a paradise for water-birds.

I was surprised to find a couple of Snipes frequenting the marsh, Herr von Thanner presumably did not meet with the species. Ducks were peculiarly scarce, and in ten days I only saw a single example, which was obtained and proved to be the Marbled Duck (*Anas marmorata*). Mr. Pittard, who shot this specimen, assures me that he has seen other ducks obtained here which certainly did not belong to this species. A single Heron frequented the sea-shore and reed-beds in turn, and Herr von Thanner, who camped in the Charco in February 1910, mentions a young one which was caught there. Just round the Point of Maspalomas, where the beach is stony, I shot two Grey Plovers out of a small flock feeding at the water's edge; Turnstones were also noticed on the rocks near by, and here I also saw a single Godwit—a bird which has not hitherto been recorded from Gran Canaria so far as I am aware. Doubtless at other seasons of the year numerous Waders of various species call here on migration; lack of observers is probably the only reason that so few Charadriidæ have as yet been recorded from this island.

The "Charco" is also a favourite resort of several species of land-birds, which appear to be entirely isolated from the rest of the island. Of these the Black-headed Warbler (*Sylvia melanocephala*) is perhaps the most interesting; Chiffchaffs were often noticed on the tamarisk-bushes; and two Shrikes (*Lanius excubitor koenigi*) frequented the flat ground behind my tent. In the evenings several Hoopoes made their appearance, flying into the "Charco" from the direction of Maspalomas village. The little Black Swift (*Cypselus unicolor*) and Martins (probably *Chelidon urbica*) were occasionally noted, but always in small numbers. From the account which Herr von Thanner gave of his visit to this spot I certainly expected to see several Coots and Moorhens, but they were remarkably scarce, and although the lagoons and pools are admirably suited to their wants, I only once caught a fleeting glimpse of one of these birds, and even then was not sure to which species it belonged. Certainly it is

not possible now in this "Charco" to come upon the pretty picture of bird-life which Herr von Thanner portrayed in his paper! Buzzards occasionally visited the ground, and Vultures, Kites, and Ravens were numerous. I never came across the Peregrines which Herr von Thanner mentions, although I kept a strict look-out for them and visited the barranco where they are supposed to breed; Ospreys, on the other hand, were by no means rare and were seen on several occasions between Messrs. Elder & Fyffes' fruit-store and Arguineguin. Both *Larus fuscus* (? subsp.) and *Larus cachinnans* were found on the coast, but the former was by far the most plentiful species. Terns (*Sterna hirundo*) were entirely absent and have ceased to breed there, as they evidently did until quite recently.

I am greatly indebted to Don Pedro Castillo, the owner of this "Charco," for most kindly allowing me to camp there, and for giving me every facility to collect on his estates.

Division VI.—*The Western Zone.*

This part of the island is really the most difficult to define, as it comprises types of very different country. Moreover, it is the district with which I am least acquainted. It embraces the wild mountainous region bordering the coast from Agaete to Mogan, and thence inland to Fataga and Tirajana. Many huge barrancos break up the coast-line, and these deep valleys are often extensively cultivated. Birds are much more abundant where cultivation exists, hence many species were noted here which were not met with in the intervening country. A typical barranco is that which leads from Puerto Mogan to the Pinar Pajonal, and the following species were noticed there in abundance: Rock-Pigeons, Shrikes, Chiffchaffs, Blue Tits, Grey Wagtails, Spectacled Warblers, Blackbirds, Canaries, Ravens, Kites, Kestrels, and Egyptian Vultures; Corn-Buntings were also seen, but were not so numerous.

From Mogan to Aldea the rough mule-path passes through fine wild scenery and thence on to Agaete. As I have already stated, I have not personally travelled along the

path, but have obtained extensive views of this part of the island both from the Pinar and the sea; the country looks very uninteresting, and I should imagine that bird-life is poorly represented, being practically confined to Ravens and the Birds-of-Prey, save in the few fertile valleys where the species already mentioned may be met with. The entire coast-line from Mogan to Sardina is rugged in the extreme, high cliffs, where several pairs of Ospreys have their stronghold, dropping sheer into the sea. On the north-west corner of the island, between Agaete and Galdar, lies an extensive and arid plain, but in the neighbourhood of Galdar itself and the adjoining town of Guia the plains are well watered and yield large crops of bananas, tomatoes, and sugar-cane. As might be expected, the birds found in this region mostly resemble those in Division I.

The principal works bearing on the subject to which reference is made in my paper are contained in the following list:—

Webb, Berthelot, and Moquin-Tandon, Hist. Nat. des Iles Canaries (Ornithologie Canarienne), 1841.
Bolle, J. f. O. 1857, pp. 258–292 and pp. 305–351.
Meade-Waldo, Ibis, 1889, pp. 1–13.
„ Ibis, 1893, pp. 187–207.
Tristram, Ibis, 1889, pp. 13–32.
Hartert, Nov. Zool. 1901, pp. 313–335.
Polatzek, Orn. Jahrb. 1908, pp. 81–119 and pp. 161–197.
„ Orn. Jahrb. 1909, pp. 1–24 and pp. 117–134.
Von Thanner, Orn. Jahrb. 1910, pp. 81–101.

An exhaustive list of the literature on the birds of the Canary Islands is given by Dr. Hartert in the 'Novitates Zoologicæ,' 1901, pp. 333–335. A great deal has been done, however, since that date.

In comparing the various subspecies with the nearest allied species from the mainland, it struck me forcibly that these insular forms are almost without exception *darker* in colouring throughout.

Some ornithologists will doubtless take exception to the many trinomials included in the following pages. If, however, these insular forms are separable by sufficient characters

from the species found on the mainland, I judge that they are worthy of subspecific rank. In each case where this has been done, I have given the characters which separate them from the original species.

A large collection of birds from the other islands of the Canary Archipelago, collected by Mr. Meade-Waldo and now in the British Museum, has been available for comparison. Throughout the paper I have quoted Dr. Hartert's valuable work 'Die Vögel der Paläarktischen Fauna' as 'Vög. Pal. Faun.,' and the 'Novitates Zoologicæ' as 'Nov. Zool.'

An asterisk (*) placed against a reference denotes the *original* description of the species or subspecies.

I hope at some future date to publish a paper dealing with the nidification of the Birds of Gran Canaria; at present, however, my notes are very far from complete on the subject, and I have therefore refrained from discussing in this paper the many interesting problems which have been brought to my notice.

I should like to express my grateful thanks to the following residents in Gran Canaria who have all done their utmost to assist me in my various expeditions in the island:—Mr. T. R. Morgan, Mr. Maurice Blandy, Mr. Vines, Mr. Charles Miller, and especially to Mr. P. R. Pittard, who has accompanied me on all my trips and helped me considerably in the forming of my collection.

I am also deeply indebted to Mr. W. R. Ogilvie-Grant for help which he has given me, and to his attendant Mr. Wells.

DESCRIPTION OF PLATES IX.–XII.

IX. Map of the Island of Gran Canaria (p. 558).

X. Fig. 1. The Cumbres of Gran Canaria (p. 560).
Fig. 2. The Pinar of Gran Canaria (p. 561).

XI. Fig. 1. Desert-like Plains of Gran Canaria (p. 563).
Fig. 2. The "Charco" of Maspalomas, Gran Canaria (p. 564).

XII. *Fringilla teydea polatzeki*, $\frac{9}{10}$ (p. 614).
Fig. 1. Male, on a branch of *Pinus canariensis*.
Fig. 2. Female, on the ground, $\frac{3}{4}$.

Caccabis rufa Red-legged Partridge.

Caccabis rufa australis Tristram, Ibis, 1889, p. 28*; Hartert, Nov. Zool. p. 330 (1901); Thanner, Orn. Jahrb. xxi. p. 98 (1910).

a. ♂. Cueva de las Ninas, 3200 ft. 10th Feb. '11.

Iris light brown, soft part round eye coral-red; bill bright coral-red; feet and legs coral-red.

In 'The Ibis' for 1889 Canon Tristram described the Partridge of Gran Canaria under the name *C. rufa australis*, and in his paper pointed out the differences between this and the European species *C. rufa*. His chief grounds for separating the insular form were: (1) the large size of the bill and greater length of the tarsus; (2) "a band of reddish brown on the nape and hind neck, brighter than in French and English, but not brighter than in Spanish examples"; (3) "whereas in European birds the whole of the rest of the upper parts are reddish brown, in the Canarian the back and upper tail are slaty grey."

Apparently the last two points are founded on his comparison of a single specimen from Canary with the material in the Natural History Museum. As I have now before me the type-specimen of *C. rufa australis* (shot in March 1888), kindly lent to me by Dr. J. A. Clubb, of the Liverpool Museum, and also the entire material contained in the Natural History Museum of both forms, I should like to make one or two remarks on Canon Tristram's observations.

With regard to the size of the beak in examples from Gran Canaria, the only two specimens which I have from this island certainly appear to have slightly larger bills, but this is *not* the case with examples which I have examined from Tenerife. Moreover, the tarsus is almost identical in length with that of European birds.

As regards the second character mentioned I must also differ, the colour of the nape and hind neck agreeing exactly with certain specimens of *C. rufa* shot in England, although it is certainly true that Spanish examples from Coruña and Madrid in the National Collection are considerably brighter

and darker throughout, doubtless constituting a dark geographical race. Lastly, the grey colouring of the back and rump at first sight appeared to be constant; when, however, the series of *C. rufa* was laid out according to the months in which the specimens were procured, it was at once apparent that those birds obtained in the first part of the year (January to May) were considerably greyer than examples shot in September, October, and November; in some cases the rump was quite as grey as in the Gran Canaria birds. This grey colouring, therefore, is evidently due to seasonal change and to wear of plumage, and cannot be counted as a distinct character. No doubt specimens obtained in Gran Canaria during the latter months of the year would be as rich in colouring as typical examples of *C. rufa* obtained at the same time. It is almost certain that the Partridge has been introduced into Gran Canaria, and, up to the present, at any rate, I do not consider that it has become sufficiently differentiated to deserve subspecific rank.

The Red-legged Partridge is never seen in the north of the island, but in the vicinity of Mogan and the Cueva de las Ninas is fairly plentiful: here, in small deserted barrancos, thickly overgrown with Euphorbia bushes and prickly pears, where the rays of the sun penetrate with double the usual vigour, several Partridges are sure to be found. In such places they lie very close, and when put up have a happy knack of always doing so at the worst possible moment for the sportsman. They are very strong on the wing, and when disturbed fly for a long distance. Occasionally I have flushed them quite in the pine-forests, but usually they prefer thicker undergrowth than is to be found there. The call is very loud and not unlike that of our British bird. In the early mornings a regular chorus may be heard of birds calling to each other.

On Feb. 12th, 1911, I camped below the Roque Nublo, at 5000 ft., in the Cumbres. This camp was in the wildest spot I have yet seen in these islands (see Pl. X. fig. 1). Towering rocks and precipices rose on every side, and even the scant euphorbia bushes were less in evidence in

this hidden valley. I was at once struck by the number of Partridges to be seen; on every side of the valley they were calling one another; the birds, silhouetted against the sky, were perched on some high rock, whence they kept up an incessant babel until nightfall, only to begin again at the first signs of daylight.

Another part of the island, very different in character, where these birds are found is amongst the almond-groves of Tirajana; many are shot there annually by the Spaniards and sent to Las Palmas. I have often seen these birds kept as pets in a small cage, and one which belongs to a shopkeeper in Las Palmas has become remarkably tame.

Examples of *Caccabis petrosa* (*? koenigi*), the form found in Tenerife, Gomera, and Lanzarote, have been recently turned out in Gran Canaria. If they survive the attentions of the Spanish sportsmen I have no doubt they will successfully establish themselves in this island.

Coturnix coturnix. Migratory Quail.

Coturnix c. africana. African Quail.

Both these species of Quail are undoubtedly found in the Canary Islands, and although I have not actually any examples from Gran Canaria in my possession, yet it is safe to assume that they both occur there.

Mr. Meade-Waldo obtained both forms in the neighbouring island of Tenerife. The resident subspecies *C. c. africana* interbreeds with the migratory Quail *C. coturnix*, and consequently hybrid birds in intermediate plumage are often seen. Male examples of the resident subspecies are readily distinguished from *C. coturnix* by having "the lores, sides of the head, chin, and throat bright rufous-chestnut," instead of pure white with a black anchor-shaped mark down the middle. The females are indistinguishable.

Quails, many of which are resident in the island, are, I believe, not nearly so rare in Gran Canaria as they appear to be. They are very hard to flush from the fields of beans, &c., which they frequent, and without dogs are easily passed over. Shooting, in February 1912, above San Matéo, I

flushed a couple of these birds in a dense field of beans, which reached to my waist. They were the first I had actually shot myself in the island. They uttered a sharp cry of alarm as they rose, and flew strongly and fast. One bird which fell was unfortunately lost. The Spaniards hunt them with dogs.

Pterocles arenarius. Black-breasted Sand-Grouse.

Pterocles arenarius Bolle, J. f. O. 1857, p. 332.

I have never seen the "Sand-Grouse" in Gran Canaria, nor have I heard of any having been shot in recent years. Proof that it was once looked upon as an habitué is given by Dr. Bolle, who, writing in 1857, remarks: "Gangas are found in the S.E. of Canaria in the neighbourhood of Juangrande and Sardinas, and are by no means uncommon; but the people there were uncertain whether they bred in the country or only came across from Tierra del Moro. The English people in the island call them 'grouse,' because of their resemblance to the Tetrao of their native land."

No doubt stragglers occasionally fly over from Fuerteventura to the south of Gran Canaria. They are resident in the former island and by no means uncommon.

Columba livia. Rock-Dove.

Columba livia Thanner, Orn. Jahrb. xxi. p. 98 (1910).

a. ♀. Near Tirajana. 10th April '09.

b. ♂. Pina Pajonal (Cueva de las Ninas). 24th Jan. '10.

c. ♂. Pinar near Juncal (4000 ft.). 8th Feb. '11.

d–f. ♂ ♀ ♀. Maspalomas village. 25th Feb. '12.

Iris reddish orange; bill black; feet pinkish claret-coloured. Total length in the flesh 12 inches.

Testes of specimen *c* were very large.

The Rock-Pigeon is most numerous everywhere in the island. The birds are very shy, and unless shot flying are not easy to obtain; they are very plentiful on the west coast and roost in the caves of the cliffs at Guanarteme, every evening flying down from the country to spend the

night, and dropping like stones from the heights above. Excellent shooting can be obtained by anyone hidden in the cliffs or stationed in a boat beneath.

In the Pinar Pajonal these were the only Pigeons seen, and, indeed, they are the only ones now left in the island, *Columba bollii* having disappeared with the laurel forests.

At Maspalomas and on the plains of Juan Grande these Pigeons are found literally in thousands, countless flocks frequenting the fields of grain in the neighbourhood of Maspalomas village: indeed, it is always a matter of great surprise to me that there are any seeds left to flourish. They nest undisturbed in the caves of the steep barrancos which run inland, and in the high cliffs on the coast.

Turtur turtur. Turtle-Dove.

Turtur turtur Bolle, J. f. O. 1857, pp. 331–332; Thanner, Orn. Jahrb. xxi. p. 98 (1910).

A summer migrant to the island. Herr von Thanner records this bird from Aguineguin, where he noticed the "first" arrival on March 13th. It is not found here in the winter months. A Turtle-Dove was seen in the summer of 1911 on the fields between Las Palmas and the Port.

There is one example, stuffed, in the Las Palmas Museum.

Fulica atra. Common Coot.

Fulica atra Thanner, Orn. Jahrb. xxi. p. 100 (1910).

From the description which Herr von Thanner gave of the "Charco" at Maspalomas I expected to find several pairs of both Coots and Moorhens. They were, on the contrary, extremely rare. In fact, only on one occasion did I catch a fleeting glance of a bird which I took to be of this species. The conditions are ideal for Coots and Waterhens to breed undisturbed. Herr von Thanner records it as breeding in the lagoons of Maspalomas and also in the little "Charco" of Arguineguin.

Gallinula chloropus. Waterhen.

Gallinula chloropus Thanner, Orn. Jahrb. xxi. p. 100 (1910).

The Moorhen is said by Herr von Thanner to be found

in the "Charco" at Maspalomas. He also establishes the species as a breeding bird and states that he received five eggs which had been taken at Maspalomas. I can only surmise that the parent birds were shot after the eggs had been taken, as there were certainly no Waterhens in the "Charco" at the time of my visit. Both this and the preceding species were known to the natives in the neighbourhood.

Oceanodroma castro. Madeiran Fork-tailed Petrel.

The Madeiran Fork-tailed Petrel is found in the seas of the Canary Archipelago, and Mr. Nicoll saw large numbers of it before reaching Gran Canaria, when on board the 'Valhalla.' Mr. Ogilvie-Grant found this Petrel breeding on the Desertas, Porto Santo, and the Azores. There are no records of its having bred on any of the Canary Islands.

Doubtless several other species of Petrels frequent the seas round Gran Canaria. I have only mentioned those which have been seen actually within sight of the island.

Bulweria bulweri. Bulwer's Petrel.

I have never seen this Petrel in the island myself, though it must, of course, occur there. Mr. Meade-Waldo writes to me that during his residence in the islands he found a pair breeding in a cave near Arucas. This town is situated some distance from the coast.

Puffinus kuhli. Mediterranean Shearwater.

a, *b*. ♀. Confital Bay. 17th Nov. '11.

The two specimens recorded above were obtained for me in November by Mr. P. R. Pittard, who has also supplied me with the following note on the species:—"Numbers of these birds frequented Confital Bay from October 1st till November 15th, 1911. The fishermen affirm that they 'turn up' every year about the same time; they appeared quite fearless, and were skimming over the sea quite close to the reef. None came within the sheltered water."

Herr von Thanner mentions that he constantly saw examples of this Shearwater in his journeys round the coast. Mr. Nicoll also obtained a single specimen off Gran Canaria when he visited the island with Lord Crawford in the 'Valhalla.'

P. kuhli breeds in the Azores (*Godman*), Madeira and Great Salvage Islands (*Ogilvie-Grant*), and Porto Santo (*Schmitz*).

Mr. Meade-Waldo, writing in 'The Ibis,' 1903, states that he has seen flocks of many thousands on the water between Gran Canaria and Fuerteventura. I noticed large numbers of these Petrels skimming about in the neighbourhood of the Isleta during a flying visit which I made to the island at the beginning of June of this year (1912).

Larus fuscus, subsp. ?

Larus fuscus subsp.? Lowe, British Birds, vol. vi. p. 5 (1912); Bannerman, Bull. B. O. C. xxix. p. 121 (1912).

a–c. ♀ ♀ ad. et imm. Las Palmas Harbour. 20th Feb. '12.

Iris clear amber; bill yellow and crimson; legs banana-yellow.

Dr. Lowe has recently separated the Lesser Black-backed Gull of the British Islands from typical *L. fuscus*, and has named this subspecies *L. fuscus britannicus*. I was privileged to examine along with Dr. Lowe the large series of Lesser Black-backed Gulls which he had at his disposal, and the only specimens which did not agree with either form were the birds which I had myself collected in the island of Gran Canaria.

As Dr. Lowe has already gone into the matter as thoroughly as is at present possible, I will quote his remarks in full:—"I have examined Lesser Black-backed Gulls from the Canaries, Tenerife, and the Grand Canary (Bannerman Coll.), and one example in the British Museum collection which was taken at Valencia. These birds appear to differ from both of the above-described races*; but whether they

* *Larus fuscus* and *Larus fuscus britannicus*.

are representatives of another race meriting the distinction of subspecific rank, the material at present to hand is too meagre to allow me to say. It may, however, be pointed out that the Lesser Black-backed Gull breeds in at least one locality off the Moroccan coast (Alboran Island, *Lilford*), and extends southwards along the West African shores as far as Bonny (*Saunders*); so that it is very possible that these local birds wander in winter to the Canaries and Madeira, or to places like Valencia on the Mediterranean shores, where they may be found along with representatives of the light-backed or more northerly race, *Larus fuscus britannicus*. These points I am now endeavouring to clear up."

I may remark that the colour of the back in specimens from the Canary Islands is intermediate between that of *L. fuscus* and *L. f. britannicus*.

I paid a flying visit to Gran Canaria on June 1st of this year and had hopes of procuring a series of the bird in question. However, in this I was disappointed, as the harbour was entirely deserted by Gulls, and, I was told, had been so for at least a month. At the time when I left Las Palmas previously, on March 11th, the Gulls were very plentiful, as the following notes which I have made during many visits to this island will prove.

In the winter months the Lesser Black-backed Gull is the commonest species frequenting Las Palmas harbour, where a number of both adult and immature birds may always be seen round the shipping or else flying leisurely along the coast. Every evening before dusk I used to notice a long line of these Gulls crossing the isthmus of sand which joins the Isleta to the mainland, and finally disappearing over the precipitous ground which borders Confital Bay, to roost in the high cliffs of Guanarteme. Whether they breed in the islands I have been unable to discover. There seems no reason why they should not do so, and especially on the little island of Alegranza. Unfortunately, no one has yet visited the outlying islets in the breeding-season. *Larus cachinnans*, on the other hand, is said by Mr. Meade-Waldo to breed on most of the islands.

Larus cachinnans. Yellow-legged Herring-Gull.

Larus cachinnans Thanner, Orn. Jahrb. xxi. p. 99 (1910).

The Yellow-legged Herring-Gull is found here in some numbers, although at times it seems to quite forsake the harbour of Las Palmas. It is not nearly so plentiful as the Lesser Black-backed Gull. Occasionally a few may be seen flying from the direction of Guanarteme towards the Isleta. On the south coast a number were noticed in company with Lesser Black-backed Gulls. Mr. Meade-Waldo found it breeding on the neighbouring islands. On the 1st of June, 1912, I saw a single Yellow-legged Herring-Gull in Las Palmas Harbour. All Gulls had deserted the harbour during the previous month.

Larus ridibundus. Brown-headed Gull.

a, b. ♂ ♀ imm. Las Palmas Harbour. 20th Feb. '11.

c. ♂ imm. Las Palmas Harbour. 20th Feb. '11.

Iris chocolate-brown; bill reddish-horn-coloured; legs dark pink.

Total length in the flesh 14·7 and 15 inches; expanse 35 inches.

These birds are all in the immature plumage of the second (?) year. Numbers of them were to be seen in Las Palmas Harbour throughout February. I did not observe a single fully adult bird.

Sterna hirundo. Common Tern.

Sterna hirundo Bolle, J. f. O. 1857, pp. 311–314; Thanner, Orn. Jahrb. xxi. p. 99 (1910).

As Herr von Thanner remarks, the Common Tern has decreased to such an extent of late years that it may be almost considered to have disappeared. I myself have never seen this bird at all, although stragglers doubtless visit the shores of the island from time to time, especially in the summer-time. In the years when Dr. Bolle visited Gran Canaria he found the Common Tern breeding near Maspalomas. The sand-hills there are an ideal spot for its nesting-grounds, and it is easy to believe that in olden days a very thriving colony was in existence. The cause

of the disappearance can only be put down to the universal and regular "egg-robbing" to which these birds were subjected. Herr von Thanner was told by the villagers of Maspalomas that "baskets-full of eggs were taken away and eaten"; and I can well imagine these short-sighted people taking clutch after clutch until the poor birds were literally driven away to a more hospitable land wherein to rear their young in peace. In any case the district of Maspalomas has not changed in itself, and is as suited to their requirements at the present day as it was sixty years ago.

Sterna cantiaca. Sandwich Tern.

Sterna cantiaca Webb, Berthelot, et Moquin-Tandon, 'Histoire Naturelle des Iles Canaries' (Ornithologie Canarienne, p. 41, 1841).

a–c. ♂ ♂ ♀. Las Palmas Harbour. 28th Feb. '11.

Iris dark chocolate, pupil dark blue; bill black, tip light yellowish horn-coloured; feet black.

Total length in the flesh 15·8 inches.

The rosy tinge on the feathers of the breast and inner webs of the primaries was more pronounced than on any Tern which I had shot previously.

The Sandwich Tern is by no means a common species on the shores of Gran Canaria. The Spanish boatmen affirm that it visits the harbour of Las Palmas once a year—in the month of February. Certainly I have not seen it on any previous occasion, and Herr von Thanner does not mention the species in his paper, though he records *Sterna hirundo*, which I have not met with myself. Webb and Berthelot gave the habitat of this species as Fuerteventura and Lanzerote. The Sandwich Tern is said to breed on the island of Alegranza.

My three examples are fully adult birds in winter plumage, the forehead being white with a few streaks of black and the nape and hinder part of the crown black. The head becomes entirely black about April. These birds have all assumed new primaries, and the white margins to the inner webs are continued to the tip of each feather.

Cursorius gallicus. Cream-coloured Courser.

Cursorius gallicus Hartert, Nov. Zool. 1901, p. 332; Thanner, Orn. Jahrb. xxi. p. 98 (1910).

a, b. ♂ ♀. Plain between the "Charco" and Maspalomas Village. 25th Feb. '12.

c, d. ♂ ♀. Sandhills near Maspalomas Village. 28th Feb. '12.

Iris dark brown; bill black; feet white, soles yellow.

The true home of the Courser in Gran Canaria is on the sandy plains which surround the "Charco" of Maspalomas. Here it breeds undisturbed, and, I am glad to say, the numbers must be considerably on the increase. At the time of my visit, in February 1912, there were, I should say, several hundred birds in the vicinity. I did not meet with any until within about a mile of the "Charco," and there they became numerous. At the time we were passing over an elevated sandy plateau close to the sea. This in turn gave way to sand-dunes, with which the birds harmonized so exactly in colour that they were difficult at first to make out. They usually betrayed their presence by running some time before taking flight. When flying the black underwing is most conspicuous. They were seldom seen in pairs, but used to feed in small flocks of half a dozen birds or more scattered over the ground "in open order," with several yards between each bird. As we drew near to a flock they would all run swiftly behind some rise in the ground and then remain still. I found them ridiculously easy to obtain, never flying far even when shot at. The cry consisted of a sharp piping note twice repeated, and was often uttered while on the wing. Mr. Meade-Waldo discovered Coursers breeding in Fuerteventura, and took the young in down on March 24th. In Gran Canaria they did not appear to have commenced laying by the end of February. Herr von Thanner met with these birds between Telde and Arguineguin, and although I did not actually see any myself until after leaving Juan Grande, yet there is no reason why they should not occur there, the ground being quite suitable to their habits.

Vanellus vanellus.

I have only once seen this bird in Gran Canaria, a solitary example flying over the golf-links at Las Palmas. This was in the winter months, but I have mislaid the actual date. Mr. Meade-Waldo mentions it as a regular winter visitor, but says he only noticed it in Tenerife and Fuerteventura.

Squatarola helvetica. Grey Plover.

a, b. Maspalomas Beach. 22nd Feb. '12.

Iris brown ; bill black ; feet greenish black.

These examples were shot out of a small flock of about seven birds which were feeding by the water's edge on a shingly beach near Maspalomas. This is the only occasion on which I have seen these birds in Gran Canaria. Mr. Meade-Waldo mentions that they are "regular winter visitors to the eastern islands."

Strepsilas interpres. Turnstone.

a. Sex? Reef in Confital Bay. 27th Jan. '11.

b, c. ♀ ♀. Maspalomas Beach. 29th Feb. '12.

Iris dark reddish brown ; bill dull black : feet reddish orange.

Total length in the flesh 8·4 and 8·5 inches.

Turnstones are fairly numerous near Las Palmas, and large flocks may be found feeding on the reef in Confital Bay at low water. Occasionally small parties fly across the strip of sand on to the other coast, where they search for food near the old castle in full view from the noisy port-road. If approached they are exceedingly shy, and are hard to obtain in consequence. Occasionally they may be found frequenting the water-tanks beyond the golf-links, but never more than singly or in pairs.

Herr von Thanner seems not to have met with this species, but it frequents the rocky parts of the coast north of the "Charco." An individual which I had shot fell some forty yards out at sea. The waves were slowly drifting the specimen to the shore, when a Yellow-legged Herring-Gull, passing along the coast, swooped down and

picked the carcase out of the water, carrying it some way out to sea, when it let its prey drop well out of my reach. Mr. Meade-Waldo was informed by the peasants that Turnstones were breeding in the eastern islands; he himself saw them paired in June. This may be the case, as they undoubtedly breed in the Azores.

Calidris arenaria. Sanderling.

a. ♂. Charco of Maspalomas. 24th Feb. '12.
b, c. ♂ ♀. „ „ 27th Feb. '12.
d. ♀. „ „ 29th Feb. '12.

Sanderlings were found in February 1912 frequenting the mouth of the "Charco" in small flocks. They are migrants to the island; I have never seen them in the north near Las Palmas.

Tringa hypoleuca. Common Sandpiper.

a. ♀. Las Palmas. Jan. '11.
b, c. ♀ ♀. Charco, Maspalomas. 23rd & 27th Feb. '12.

Iris dark blue with a reddish tinge; bill black; feet grey-green.

Total length in the flesh 8 inches; expanse of wings 13·6 inches.

Herr von Thanner does not record the Common Sandpiper from Gran Canaria. On the rocks between Las Palmas and the Port, and also on the reef in Confital Bay, it is most plentiful. I saw this species in every month which I have been in the island, December to April inclusive, and I have no doubt that it is resident throughout the year. I several times saw Common Sandpipers in the "Charco" at Maspalomas, where they frequented the edges of the stagnant pools. They probably breed there.

Tringa alpina. Dunlin.

a. ♀. Mouth of the "Charco," Maspalomas. 23rd Feb. '12.

Dunlins are occasionally found on migration, but even then are not by any means plentiful on this island.

Totanus glottis. Greenshank.

Limosa limosa. Bar-tailed Godwit.

Both these species are occasional visitors to Gran Canaria, where they may be seen on the stony beach near Elder and Fyffe's fruit-store at Maspalomas.

Ægialitis cantiana. Kentish Plover.

Ægialitis cantiana Hartert, Nov. Zool. 1901, p. 332.

Ægialitis cantianus Thanner, Orn. Jahrb. xxi. p. 99 (1910).

a. ♂. Las Palmas. 8th April '09.

b. ♂. „ 15th Jan. '10.

c. ♂. „ Jan. '11.

d–h. ♂ ♂ ♀ ♀ ♀. Shore near the Charco, Maspalomas. 23rd–26th Feb. '12.

Iris purplish blue; bill black; feet pale slate-coloured.

Total length in the flesh 6½ inches; expanse of wings 12 inches.

The Kentish Plover is a common species on the shore near Las Palmas. It is very tame, small flocks running along in front of passers-by within a few dozen yards, and then only flying a short distance along the edge of the waves. They are resident in this island, and on the Maspalomas coast and at the mouth of the "Charco" were by far the most plentiful of all the Waders. They undoubtedly breed in the neighbourhood, and a bird which I disturbed on the 29th of February behaved exactly as if it had a nest close by, although I was unable to find it.

Ægialitis dubia. Lesser Ringed Plover.

a. ♂. Las Palmas. 19th Jan. '10.

The Lesser Ringed Plover is so difficult to distinguish on the wing from the common and larger bird that it is probably often mistaken for that species*. This example

* The Lesser Ringed Plover (*Æ. dubia*) is easily distinguished from the allied species (*Æ. hiaticola*) by its having the shaft of the first primary white and *the remaining shafts black*, while in the Ringed Plover all the primary shafts are white.

is the only one which I have shot in the island. A pair were found breeding in April 1911. Two eggs were taken and sent to me by my friend Mr. Pittard. He writes that he procured the eggs in the barranco behind the Catalina. No nest was made, but the eggs placed in a hollow scooped out in the ground more than a mile from the sea. Although Mr. Pittard watched for a considerable time he saw no signs of the birds themselves, and eventually took the eggs, which otherwise would certainly have fallen a prey to the watchful Spanish boys.

ÆGIALITIS HIATICOLA. Ringed Plover.

Ægialitis alexandrinus Thanner, Orn. Jahrb. xxi. p. 99 (1910).

a, b. ♂ ♀. Las Palmas. 5th Sept. '10.

c. ♀. Las Palmas. 10th Jan. '11.

d. ♂. Shore of the Charco, Maspalomas. 23rd. Feb. '12.

Iris dark bluish brown; bill black; feet orange, nails black.

Total length in the flesh 7 inches; expanse of wings 14·8 inches.

The testes of specimen *d* were minute.

The Ringed Sand-Plover is very plentiful on the coast on both sides of the sand-banks which separate the Isleta from the main island, and may be constantly seen winging its way over the houses from the one shore to the other. It is often to be found, in company with the Kentish Plover, frequenting the large water-tanks about two miles inland. These tanks are often in a semi-dry condition, and at high tide the shore-birds resort to them while the reefs near Confital Bay are covered.

In February of 1912 for some reason these birds entirely forsook the sands between the Port and town of Las Palmas. In former years, as I have mentioned, this was a favourite resort of these Waders. I found them in small numbers along the sandy coast near Maspalomas. They are migrants to the island both in spring and autumn.

Numenius phæopus. Whimbrel.

a. ♂. Las Palmas. 12th June '11.

Iris dark hazel; bill—upper mandible dark horn-coloured, lower mandible lighter; feet dark slate-coloured.

Total length in the flesh 17·6 inches; expanse of wings 32 inches.

I have seen these birds occasionally on the reef in Confital Bay, whence they occasionally wander over the isthmus to the Las Palmas shore. In the south of the island single examples were often noticed on the rocky parts of the coast. I observed a pair of these birds on the rocks near the Santa Catalina Castle on the 1st of June, 1912. They were very tame and allowed me to approach them within twenty-five yards.

Œdicnemus œdicnemus. Thick-knee.

Œdicnemus œdicnemus œdicnemus Hartert, Nov. Zool. 1901, p. 331; Thanner, Orn. Jahrb. xxi. p. 98 (1910).

Œdicnemus œdicnemus insularum Sassi, Orn. Jahrb. 1908, p. 32.

a. ♂. Plateau above Las Palmas. 15th March '11.

b. ♀. „ „ 12th Feb. '12.

c. ♂. Plain above the Charco, Maspalomas. 23rd Feb. '12.

Iris bright clear amber, pupil dark; bill—basal half yellow, extremity black; feet dull sulphur-yellow.

Sassi's description of the Canary Island Thick-knee, which he calls *Œdicnemus œdicnemus insularum*, does not apply to the three examples which I obtained in Gran Canaria. I have compared my specimens with typical *Œdicnemus œdicnemus* and with examples from Tenerife, from *both* of which it differs strikingly in being much whiter beneath, and, in consequence, the markings of the breast are more clearly defined. The throat is likewise as white as the belly; the upper parts are darker and not so reddish sand-coloured; moreover, the dark shaft-streaks to the feathers of the crown which give to the head such a streaked appearance are heavier. In size the bird from Gran Canaria is smaller, as

can be seen from the following measurements of the wing. Examples which Mr. Meade-Waldo shot in Tenerife I am unable to separate from European birds.

Gran Canaria.	Tenerife.	Europe.
♂ 23 mm.	♂ 25 mm.	♂ 24 mm.
♀ 22·5 „	♀ 24 „	♂ 23·5 „
♂ 22·2 „	♀ 22·8 „	♂ 23·3 „

The "Alcaravan," as the Norfolk Plover is called in the Canary Islands, is a resident species found in some numbers in suitable places in the island. In certain barrancos near the Las Palmas golf-links I have flushed no less than eight birds in as many hundred yards, but this is unusual, as they are known to prefer escape by running, or lying perfectly still with the head and neck stretched before them flat on the ground. At dusk they are very noisy, and at this time are continually heard calling. Part of the ground between the Port and town of Las Palmas is known as "Alcaravaneras" from the number of these birds which frequent it, although in later years they have become more scarce, or, at any rate, less often heard on these fields. In the central part of the island they do not appear to be nearly so plentiful, as I have seldom heard the call when camping on the higher ground. "Alcaravans" were numerous on the sandy plateau between Elder and Fyffe's fruit-store on the coast and the "Charco" at Maspalomas, where a number of them were flushed from a belt of *Euphorbia*.

They breed in April, and I have an egg taken near Las Palmas which appears to be smaller than usual.

Houbara undulata. Houbara Bustard.

Otis undulata Meade-Waldo, Ibis, 1893, p. 202.

Mr. Meade-Waldo says that "the Houbara is very occasional in Gran Canaria." It is a resident species in Fuerteventura, and stragglers at times may find their way over to the sandy plains of Maspalomas. The country there is well suited to their needs, but doubtless such a large bird would

very soon be noticed and fall a prey to some watchful gunner. I could hear no news of any having been seen during my visit to Maspalomas in February 1912.

Ardea cinerea. Heron.

Ardea cinerea Thanner, Orn. Jahrb. xxi. p. 99 (1910).

Herons are often to be found in the neighbourhood of the Isleta, and I have several times noticed them fishing on the reef, which is exposed at low tide in Confital Bay. In January 1911, two were seen there, together with a Curlew and several flocks of small Waders; on being disturbed they flew to the mainland.

Westwards of Confital Bay a small rock lies exposed some five hundred yards from the Point, and this is a very favourite place for Herons to spend the day. One day in February 1912 I counted as many as six at once; they roost in the high cliffs towards Guanarteme. In the south of the island Herons were noticed daily on the Maspalomas coast. One bird which frequented the "Charco" was always to be seen in the same place. Herons doubtless breed in the neighbourhood, and Herr von Thanner mentions a young bird unable to fly which was caught the year previous to his arrival. During a visit which I paid to the island in June of this year, I was informed that a pair of Herons had built a nest on a rock off the Isleta; unfortunately I had not time to visit the spot myself.

Anas marmorata. Marbled Duck.

Anas marmorata Thanner, Orn. Jahrb. xxi. p. 100 (1910).

a. ? "Charco," Maspalomas. 24th Feb. '12.

Iris dark; bill black, greenish at base; feet greyish-green, webs black.

Total length in the flesh 16·2 inches.

Ducks are generally to be found after a heavy gale frequenting the tanks beyond the golf-links, but hitherto I have failed to procure any. They are occasionally shot at Maspalomas, where Herr von Thanner procured specimens. I have had no means of ascertaining whether the large flock of ducks which visited Las Palmas in March 1911 were of

this species or not. Herr von Thanner states that this Duck "undoubtedly breeds at Maspalomas," but his evidence does not seem very conclusive. Other species of Ducks certainly visit the "Charco" occasionally.

Sula bassana. Gannet.

Gannets undoubtedly wander to the shores of Gran Canaria occasionally, but are not often noticed.

Neophron percnopterus. Egyptian Vulture.

Neophron percnopterus Thanner, Orn. Jahrb. xxi. p. 86 (1910).

a. ♂. Aguimes. 22nd Feb. '12.

b. ♀. Maspalomas Village. 25th Feb. '12.

Iris dark orange; bill—tip black, base of mandible bright yellowish orange; feet yellow.

Total length in the flesh 25·2 inches; expanse of wings 59·5 inches. Weight in the flesh of specimen (*a*) 4 lbs. 7½ oz., (*b*) 4 lbs. 8 oz.

Egyptian Vultures are found throughout the island. In the neighbourhood of Las Palmas they are very plentiful. Several of these unwieldy-looking birds nest and roost in the barrancos just above "the Catalina," and spend much of the day wheeling in high circles above the golf-links. In the evenings they fly down to the beach, where they may be very closely observed walking just below the windows of the Beach Club, and shewing no fear whatsoever. Up in the hills they are not so easily obtained, unless one chances to disturb them when feeding. They appeared to be plentiful in every part of the island that I visited, and were very numerous on the plains south of Aguimes. The two which I procured were both fine adult birds. The nest is a clumsy structure built on a ledge of rock and generally very hard to reach. These Vultures are indescribably filthy eaters and do an enormous amount of good in scavenging.

Haliaëtus albicilla. Eagle.

On 23rd of December, 1908, while riding from the village of San Matéo to Teror I noticed a large bird high up in

the sky which, even at that immense height, seemed to stand out against the few Egyptian Vultures and Kites which were to be seen. I have little doubt that this was a Sea-Eagle (*Haliaëtus albicilla*), as stragglers of that species occasionally visit the Canary Islands. The bird came considerably nearer to me than when I first observed it, and I was able to watch its evolutions for some time through strong Zeiss glasses. Such an occurrence in Gran Canaria is very rare, and I have not seen an example since.

Buteo buteo insularum. Buzzard.

Buteo buteo insularum Floericke, Mitteil. österr. Reichsb. iii. 1903, p. 61*; Thanner, Orn. Jahrb. xxi. p. 88 (1910).

Buteo buteo subsp. ?, Polatzek, Orn. Jahrb. 1908, p. 111.

I have been unable to see Floericke's description of this subspecies.

In the Cumbres and the south of the island the Buzzard is fairly plentiful. I have never met with any of these birds lower than the Santa Brigida in the north. At the latter place, however, a pair were generally to be found in the Vega, and their shrill whistling cry could be heard frequently as they hunted the sides of the immense barranco below the picturesque Spanish town. To obtain specimens it is necessary to spend a few days encamped on the "Cumbres," where, if one is lucky, a few chance shots may be obtained. They are very wary, and are fond of the most inaccessible rocks in this wild stretch of mountainous country. A resident species throughout the year, the numbers are increased occasionally by an influx of migrants.

Falco peregrinus. Peregrine Falcon.

Peregrine Falcon, Tristram, Ibis, 1889, p. 17.

Falco peregrinus Thanner, Orn. Jahrb. xxi. p. 87 (1910).

There are two male specimens of the Peregrine Falcon in the Las Palmas Museum, said to have been shot near Firgas. At the present time this species is almost exterminated in Gran Canaria, but Herr von Thanner saw a male example at Maspalomas in 1909, and mentions that there was a nest inland. Dr. Tristram saw a single bird close to the Sitio de

Arriba in 1888, and a pair in the Barranco de la Virgen near Firgas. They have certainly not increased since then, and I have never once met with the species. However, the Spaniards engaged in the fruit-store near Maspalomas know the bird by sight, and say that it occasionally visits this part of the coast, but is very rare.

Accipiter nisus. Sparrow-Hawk.

Accipter nisus Thanner, Orn. Jahrb. xxi. p. 87 (1910).

Herr von Thanner only saw one example of the Sparrow-Hawk in Gran Canaria. This was a female, in the Pinar near the Cueva de las Ninas, which he does not appear to have obtained. I have never seen a single bird, although I have twice been encamped near the Cuevas, and have been to many parts of the island which Herr von Thanner does not appear to have visited. His surmise that it is "very rare" may be taken as absolutely correct. In Tenerife I am told that it is by no means uncommon.

Tinnunculus tinnunculus canariensis. Canarian Kestrel.

Tinnunculus tinnunculus canariensis Koenig, J. f. O. 1889, p. 263*; Thanner, Orn. Jahrb. xxi. p. 88 (1910).

a. ♀. Las Palmas. Dec. '08.

b, *c*. ♂ ♂. Between Aguimes and Tirajana. 10th April '09.

d. ♂. (Santa Bartolomé), Paso de la Plata, 5500 ft. 22nd Dec. '09.

e. ♀. Pinar Pajonal. 23rd Jan. '10.

f. ♀. Mogan, 100 ft. 25th Jan. '10.

g. ♀. Las Palmas?

h. ♂. Above Juncal. 6th Feb. '11.

i. ♂. Roca Nuhlo, 5000 ft. 12th Feb. '11.

k. ♂. Cumbres, 5650 ft. 12th Feb. '11.

l. ♂. San Matéo; died in captivity. 21st Feb. '11.

m. ♀. Maspalomas Village. 25th Feb. '12.

Iris brown; bill bluish horn-coloured, cere yellow; feet yellow.

Total length [♂] 12·3 inches; [♀] 13·5 inches.

This is a dark-coloured race found in the Canary Islands and Madeira.

The Kestrel is extremely abundant throughout the island, and wherever my travels in Gran Canaria took me it was seldom, indeed, that one or more specimens were not in sight; perhaps they are most plentiful in the Monte district, but numbers are also found in the Cumbres up to the highest point, and also hunting over the wide plains on the west. Several may also be seen frequenting the hillsides behind the Catalina Hotel. Resident throughout the year, their numbers are largely increased by migrants in the spring, but whether the latter remain to breed in the island I have been unable to ascertain. These birds are mostly very richly coloured. They roost in the barrancos which run back from the coast, and nest in the crannies in the rocks and in the tops of palm-trees. The staple food of this species in the summer consists, I believe, of lizards, hundreds of which are found everywhere, but from December to March, when the weather is cool, very few lizards are to be found, and the Kestrels then have recourse to other food. In the crop of specimen *h* I found a large number of black ants, and in the gizzards of specimens *i* and *k* the larvæ of a species of *Noctua* were discovered.

Milvus milvus. Common Kite.

Milvus ictinus Thanner, Orn. Jahrb. xxi. p. 88 (1910).

a. ♀. Cueva de las Ninas, 3000 ft. 9th Feb. '11.

b. ♀. Maspalomas "Charco" (sea-level). 29th Feb. '12.

Iris light amber; bill horn-coloured, base of lower mandible, cere, and gape yellow; feet sulphur-yellow.

Total length in the flesh 24·4 inches; expanse of wings 60 inches; wing 19 inches.

Mr. W. P. Pycraft, who has closely examined both the above-mentioned specimens, has kindly supplied me with the following notes on the plumage:—"Specimen *a* procured at the Cueva de las Ninas differs conspicuously from specimen *b* obtained at the 'Charco' of Maspalomas in having the breast of a pale, instead of a dark rust colour, and narrow instead of

broad black longitudinal stripes; the bars across the tail-feathers are obsolete and the rust-coloured areas on the wing-coverts, hind-neck, and tail are much paler. The whole plumage is much faded—'worn to rags,' even more than the Maspalomas specimen, but, as in this example, the four outermost primaries are almost new and black, the remaining ones are much frayed and are faded to rusty brown. The outer tail-feathers have all lost an inch or two from their tips. On the hind-neck of this bird are a few feathers which are of a much darker rust-colour, and have much broader longitudinal stripes than the neighbouring feathers, from which they also differ in being almost unworn. Are these new feathers, or feathers which from their position have escaped wear and tear from exposure? Similarly, at the elbow-joint and on the lower back the feathers shew no signs of wear whatsoever."

Kites are very plentiful in the island; over almost every village a pair of these fine birds can be seen diligently searching for food. They appear to be found in Gran Canaria both in the winter and summer months. I first saw them in March, and subsequently during all my visits to the island. They are much more fearless than the Buzzard, and occasionally come down as low as Las Palmas, where I have seen them soaring over the sea in company with Egyptian Vultures. I found them plentiful in the Cumbres, and also in the extreme south of the island, where they were much more fearless than in the north. The arrival of a number of fishing-boats on the shore near Maspalomas was the signal for several Kites to appear, swooping down so close to the boats that I could almost have struck them with an oar.

Dr. Tristram ('Ibis,' 1889, p. 22) remarks that the Kite is a summer migrant, retiring in the winter. I do not think this is the case, as I have found it in Gran Canaria in December, January, February, and March. Very possibly a partial influx takes place in the spring, and a corresponding decrease in their numbers is noticeable in the winter months, but even then they are by no means rare.

Pandion haliaëtus. Osprey.

Pandion haliaëtus Thanner, Orn. Jahrb. xxi. p. 86 (1910).

a. ♂. Maspalomas. 23rd Feb. '12.

b. ♂. „ 27th Feb. '12.

Iris bright yellow; bill black, base whitish; feet greenish white.

Total length in the flesh 23 inches; expanse of wing 64 inches. Weight in the flesh 3 lbs. 9 oz.

These magnificent birds are, I am glad to say, by no means rare. They frequent the coast from Maspalomas westwards, and during my stay at the "Charco" I saw several individuals, besides the two which I obtained. They were all quite fearless, and while watching one flying leisurely along the coast I was lucky enough to see the bird suddenly dive with a loud splash completely below the water. In the space of three or four seconds it reappeared holding a fairly large fish in its talons. Its legs were stretched out to their utmost with the weight of the fish, and in this manner it flew slowly towards the shore. Another pair inhabit the cliffs between Arguineguin and Mogan. Herr von Thanner observed the Osprey on all the coasts which he visited, and mentions a nest in the high walls of a barranco, far inland, to the east of Maspalomas.

Strix flammea. Barn-Owl.

Strix flammea Thanner, Orn. Jahrb. xxi. p. 89 (1910).

Strix flammea gracilirostris Hartert, Bull. B. O. C. xvi. p. 31.

I have met with this Owl only once during my wanderings in the island, though it is said by Herr von Thanner to be found in the north. The single specimen used to frequent the country near the Cueva de las Ninas, but we never managed to secure it, although it was often heard and once seen sitting on the ground in the bright moonlight close to our tent by my companion Mr. P. R. Pittard.

Dr. Hartert has described a subspecies of the Barn-Owl from Fuerteventura and Lanzarote which he calls *Strix*

flammea gracilirostris. I have not been able to compare Barn-Owls from Gran Canaria with the type specimen from Fuerteventura, so am unable to state whether the bird found in Gran Canaria is similar to the form found in the Eastern Islands. Two badly stuffed examples in the Las Palmas Museum certainly struck me as having very slender bills.

Asio otus canariensis. Long-eared Owl.

Asio otus canariensis Madarasz, Orn. Monatsb. 1901, p. 54*; Hartert, Nov. Zool. 1901, p. 329; Thanner, Orn. Jahrb. xxi. p. 89 (1910).

a–e. ♂ ♂ ♂ ♂ ♀. Telde. 9th Feb. '10.

The Canarian Long-eared Owls differ from the European species *Asio otus* in two essential points :—

(1) They are considerably darker on the upper parts and to a lesser degree on the under side.

(2) A marked difference is at once noticeable in the size of the birds, *Asio otus canariensis* being the smaller. The wing-measurements of the eight examples which I have compared are all 1–1½ inches shorter than in typical examples of *Asio otus*.

Madarasz in his original description claims another character, *i. e.* that "the light portion of the base of the primary quill is divided in the centre of the inner vane by means of a dark band." This character is not in the least borne out by the examples which I have examined.

The Long-eared Owl is far more plentiful than the preceding species. The five specimens from Telde were all obtained at once and sent to me in the flesh. I have also seen one at Tafira. It breeds in the island, and Herr von Thanner mentions one which built a nest in a bushy young palm-tree in a swamp at Maspalomas. In 1911 Mr. Meade-Waldo, writing to me, mentions having flushed as many as seven birds together in the *Euphorbia canariensis*. The Owls are fond of roosting in the high palm-trees before the branches are cut.

Upupa epops. Hoopoe.

Upupa epops Hartert, Nov. Zool. 1901, p. 328 ; Thanner, Orn. Jahrb. xxi. p. 89 (1910) (part.).

Upupa epops fuerteventuræ Polatzek, Orn. Jahrb. 1908, p. 165 : Thanner, Orn. Jahrb. xxi. p. 89 (1910) (part.).

a. Near Tirajana. 8th April '09.

b, c. ♀. The "Charco," Maspalomas. 24th Feb. '12.

d. ♀. Maspalomas Village. 25th Feb. '12.

e, f. ♂ ♀. Juan Grande. 2nd March '12.

Iris dark brown ; bill black ; feet greyish brown.

Total length in the flesh 11·1–11·3 inches.

Hoopoes are resident in the island, but a considerable addition to their numbers takes place in the summer months. At this time of the year they are much tamer than in the winter, allowing anyone to approach to within a very few yards : they are commonly seen in the beautiful garden of the Santa Catalina Hotel. In the winter they are scarce in the neighbourhood of Las Palmas, but odd pairs occasionally wander down from the interior, and I have several times flushed these birds on the ground near the golf-links. A single pair is generally to be found in many of the inland villages in the north, such as Firgas, Moya, Arucas, &c. South of the Cumbres they become more plentiful, and in these isolated spots shew no signs of fear whatever. They were most numerous in the "Charco" at Maspalomas, where they used to appear in the evenings, sometimes as many as four or five at a time. Herr von Thanner recognises a subspecies, *Upupa epops fuerteventuræ* Polatzek, and records specimens obtained at the "Charco" under that name.

Cypselus murinus brehmorum. Pale Swift.

Cypselus murinus brehmorum Naumann, Naturg. Vög. Mitteleuropas, iv. 1901, p. 233*; Hartert, Nov. Zool. 1901, p. 326 ; id. Vög. Pal. Faun. vol. ii. p. 839 (1912).

Apus apus brehmorum Hartert ; Naumann, Naturg. Vög. Mitteleuropas, iv. 1901, p. 233 : Polatzek, Orn. Jahrb. 1908, p. 163.

a, b. ♂ ♀. Barranco below Santa Brigida. 1st April '09.

c. ♀. Between Maspalomas and Juan Grande. 2nd March '12.

Iris brown; bill black; feet black. Wing-measurements 167–172 mm.

C. m. brehmorum is paler and more brownish grey than *C. apus*, the white on the throat extends lower, and the forehead is decidedly paler.

From *C. murinus* it is distinguished by its darker colouring throughout.

This Swift is almost entirely confined to the north of the island; Herr von Thanner never met with it in the south, and I have only done so on one occasion, near Juan Grande, where about ten birds were hawking over the plain. Very few are to be seen in the winter months.

In April (1910) when passing through the town of Aguimes, I was very much struck with the thousands of Swifts which were hawking over the houses—the air was literally full of them, but in about four days' time they had totally disappeared. This is the only occasion on which I have seen this Swift in any numbers. Earlier in the year a few occasionally make their appearance in the neighbourhood of Las Palmas and Santa Brigida. Canon Tristram believed them to be resident, but in this, I think, he was mistaken; by far the greater number observed are summer migrants.

On the 18th of August (1908) I observed a few Swifts in the Monte, and in May and June (1912) I noticed several hawking over the Port Road.

Polatzek found these Swifts in the Barranco Guiniguada. In August and September he mentions that they went regularly every morning along the Barranco past San Matéo towards the heights, and returned about five o'clock in the afternoon.

Cypselus unicolor. Madeiran Black Swift.

Cypselus unicolor Tristram, Ibis, 1889, p. 23.

Apus unicolor Hartert, Nov. Zool. 1901, p. 327 : Polatzek, Orn. Jahrb. 1908, p. 164.

a, *b*. ♂ ♀. Near Barranco de Fataga, Maspalomas, 28th Feb. '12.

Iris dark; bill black; feet blackish.

This is the resident species generally found in the south of Gran Canaria, where it frequents the deep barrancos, and roosts in the high overhanging cliffs. A few birds occasionally wander to the "Charco" on the coast, but they are generally confined to the higher level. Curiously enough, I have seldom seen these little Swifts anywhere in the north of the island, but I believe there is a colony in the Barranco de la Virgen near Firgas. Polatzek records them from Tafira.

Dendrocopus major thanneri. Thanner's Great Spotted Woodpecker.

Picus major Thanner, Orn. Jahrb. xxi. p. 91 (1910).

Dendrocopus major thanneri Le Roi, Orn. Monatsb. 1911, p. 81 *.

Dryobates major thanneri Hartert, Vög. Pal. Faun. vol. ii. p. 906 (1912).

a. ♀. Near Cueva de las Ninas, 750 metres. 22nd Jan. '10.

b. ♂. Pinar Pajonal. 23rd Jan. '10.

c. ♂. Cueva de las Ninas, 760 metres. 24th Jan. '10.

d. ♂. Pinar Pajonal, 830 metres. 23rd Jan. '10.

e. ♂. Pinar behind Cueva de las Ninas, 3400 ft. 10th Feb. '11.

f. ♂. Pinar above Juncal, 4000 ft. 11th Feb. '11.

Iris cherry or bright red; legs and feet slate-coloured to black; bill blackish horn-coloured; nails black.

Total length 9·2–9·7 inches: expanse of wing 16·2 inches: tip of the wing to tip of tail 1·9 inches.

Dendrocopus major thanneri is distinguished from *D. m. canariensis* (typical locality Tenerife) by having (1) the entire under side lighter throughout, (2) the brownish frontal band generally lighter. From typical Swedish examples of *D. major* it is distinguished by the darker brown

under side (light coffee-colour), which is intermediate in shade between *D. m. canariensis* and *D. major*.

These beautiful birds are confined to the pine-forests, and in these woods are fairly plentiful. In the various excursions which I have made in the Pinar Pajonal I met with the Great Spotted Woodpecker on every occasion. In flight they are most conspicuous. During the month of February they were always seen in pairs, and were not so shy as other members of the genus which I have come across. Their cry is very loud and betrays their presence at a long distance. Nesting-holes of this species seemed to me to be peculiarly scarce. Herr von Thanner remarks that these holes were always placed higher up the tree-trunks than in the woods of Tenerife. Despite its circumscribed area this bird is extraordinarily well known by the peasants.

Hirundo rustica. Swallow.

Large numbers of Swallows arrive in the island in the early summer, and may be seen hawking over the corn-fields. They do not remain to breed. Herr von Thanner mentions having seen *H. rustica* near Maspalomas as early as February 5th, after a violent storm.

Chelidon urbica. House-Martin.

An irregular migrant. I have only once seen the species in the winter months, *i. e.* two examples flying over the "Charco" in company with a few Swifts on February 25th (1912). Herr von Thanner saw great numbers at Maspalomas on February 5th after a violent storm.

Turdus merula cabreræ. Blackbird.

Turdus merula cabreræ Hartert, Nov. Zool. 1901, p. 313 *; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

a. ♂. San Matéo, 2500 ft. 22nd Dec. '08.

b. ♂. Cueva de las Ninas, 760 metres. 24th Jan. '10.

c, d. ♂ ♀. Santa Brigida, 1500 ft. 20th Jan. '11.

e. ♀. Juncal, 3600 ft. 6th Feb. '11.

f, g. ♂ ♀. Above San Matéo, 2800 ft. 11th Feb. '12.

Iris chocolate-brown, pupil blue ; bill (♂) orange, (♀) brown ; feet brownish horn-coloured.

Total length in the flesh 10·1 inches ; expanse of wings 14·8 inches.

This insular race of Blackbird is distinguished from *T. merula* by its longer bill, shorter wing and tail, and by the very dark colouring of the female.

The Blackbird is by no means conspicuous in Gran Canaria, and is confined to the cultivated ground and deep sheltered barrancos. In the Monte two or three individuals can generally be seen close to Santa Brigida, and the woods between this place and San Matéo are perhaps the spots most frequented by them in the island. In the south I have met with them sparingly, generally in the almond-groves or near some village, where their familiar cry has betrayed their presence. They are resident and breed in the island, and, contrary to the custom of the bird found in England, lay very few eggs in a clutch. The song is very seldom heard.

Turdus musicus. Song-Thrush.

Turdus musicus Meade-Waldo, Ibis, 1889, p. 1.

a, b. ♂ ♂. Santa Brigida. 20th Jan. '11.

c. ♂. Cueva de las Ninas, 2800 ft. 7th Feb. '11.

Iris reddish-brown ; bill—upper mandible black, lower mandible yellowish ; feet yellow.

Total length in the flesh 8·1 to 8·9 inches ; expanse of wings 13·6 inches.

The Song-Thrush is a winter visitor to Gran Canaria ; I found it in considerable numbers near the Cueva de las Ninas in February 1911. A few were seen near Santa Brigida in January, but they are by no means plentiful in the Monte districts. I was much struck by the remarkable wildness displayed by these birds ; they were very hard to approach, and flew with surprising swiftness. They do not remain to breed.

Erithacus rubecula superbus. Tenerife Redbreast.

Erithacus superbus Koenig, J. f. O. 1889, p. 183 *.

Erithacus rubecula superbus Thanner, Orn. Jahrb. xxi. p. 92 (1910) ; Hartert, Vög. Pal. Faun. vol. i. p. 754 (1910).

a–c. ♂ ♂ et ? San Matéo. Between 5th–13th Feb. '11.
d. ♂. Above San Matéo, 2800 ft. 11th Feb. '12.
Iris dark ; bill black ; feet brown.
Total length in the flesh 5·2–5·4 inches.

This fine dark-breasted Redbreast is very scarce in the island of Gran Canaria. The first three examples mentioned were shot by a Spaniard above San Matéo and sent to me in the flesh. Another was seen by one of my party on the way from San Matéo to the Cumbres just within the vegetation belt. Herr v. Thanner mentions it as "common" at Tejeda and Moya, and says that he saw several above Mogan. Certainly I never saw a Redbreast in the Pinar although I kept a sharp look-out for it.

In January 1912 a "Robin" was actually seen in the garden of a house between the Port and Las Palmas at sea-level; that the species should be seen so low down as this is a remarkable occurrence. During a stay of two days at San Matéo in February 1912 I saw several Redbreasts at very close quarters. The first was singing from a tree high up the hillside, and my attention was attracted to it by the peculiar liquid notes which I certainly did not recognise as ever having heard previously. Another was seen not far away, 300 feet above San Matéo. It was remarkably tame, and flew on to a stone within six yards of our party. Its favourite haunt in the neighbourhood is on the sides of the deep barranco which leads from the village towards the Cumbres. Here, amidst the luxuriant growth of flowering plants, cactus, and other tangled vegetation, the Redbreast spends its days, seldom seen by any but those who know its habits, and doubtless nesting in the many hidden recesses, which afford it seclusion and shelter. I have not myself found its nest, but Mr. Meade-Waldo mentions that it is "not unfrequently found placed in the branches of a tree ; the number of eggs laid being two or three, occasionally four." Certainly Herr von Thanner's assertion that he found this bird "very frequent everywhere on the north side of the island" is far from my own experience, as I look upon it as decidedly rare and very locally distributed.

It is a remarkable fact that the Common Redbreast, *Erithacus rubecula*, which is found in the neighbouring islands of Gomera, Palma, and Hierro, is *not* found in Gran Canaria or Tenerife, *Erithacus rubecula superbus* taking its place in these two islands.

Sylvia atricapilla. Blackcap.

Sylvia atricapilla obscura Tchusi, Orn. Monatsb. 1901, p. 129*; Thanner, Orn. Jahrb. xxi. p. 91 (1910); Hartert, Vög. Pal. Faun. i. p. 585 (1910) (geographical form).

a. ♂. Santa Catalina Garden, Las Palmas. Dec. '08.

b. ♂. Las Palmas. 11th Jan. '09.

c. ♀. Santa Brigida. 5th Jan. '09.

S. a. obscura Tschusi was supposed to be slightly more dusky, but see Dr. Hartert's remarks, Vög. Pal. Faun. i. p. 585.

The "Capirote," as this bird is known locally, is, after the Canary, the finest songster in the islands. It is to be found in numbers in every garden, being confined chiefly to the cultivated districts. In Las Palmas it is most confiding, building its nest in numbers in the large grounds of the Catalina Hotel. I examined one nest in another garden built in a shrub within ten yards of the house. On 19th March (1910) I found a nest built in a thick prickly bush; it was composed largely of wool interwoven between grass and lined entirely with hair; the eggs, which were four in number, were slightly incubated.

One male example that I shot had the chin of a dull chestnut-colour, which is said to be the result of the bird feeding on oranges, but this is the only specimen I came across with this peculiar marking.

The Blackcap is resident in the island, but the numbers are largely increased in the spring by migrants. Von Thanner notes that the migratory birds can easily be distinguished by the thick layer of fat which is found on their skin. At the beginning of June (1912) Blackcaps were more numerous in the private gardens of Las Palmas than I had ever seen them previously.

Sylvia melanocephala leucogastra. Sardinian Warbler.

Sylvia melanocephala leucogastra Ledru, Voy. Ténérife n.s.w. p. 182 (1810); Thanner, Orn. Jahrb. xxi. p. 92 (1910); Hartert, Vög. Pal. Faun. i. p. 594 (1910).

a, b ♂ ♂. "Charco," Maspalomas. 24th Feb. '12.

c. ♀. "Charco," Maspalomas. 28th Feb. '12.

Iris light brown, eyelids brilliant red; bill black; feet yellowish flesh-coloured.

The male of this subspecies is similar to *S. melanocephala*, but somewhat smaller; the inner webs of the outer tail-feathers are not pure white, but flecked with grey.

The female is distinguished by having the entire upper side greyer, especially on the crown, and in having a similar tail to the male.

I have examined a series of this Warbler from the Canary Islands, and the differences noted above are, as I am aware, very small indeed. However, one would naturally suppose an insular form of this little bird in the Canary Islands to vary from the true Sardinian Warbler, and although these differences are very slight, especially in the case of the male, yet they are constant in the series at my disposal, and on these grounds I propose to uphold this new subspecies.

I did not meet with the Black-headed Warbler until my last expedition in the island, which took me to the extreme southerly point of Gran Canaria. Here, in the "Charco," I found several pairs of this little bird, apparently isolated in the small oasis. They were extremely difficult to shoot as they hopped about in the tamarisk bushes or darted in and out amongst the high clumps of long grass. Eventually I managed to secure three specimens. I should say there must have been about ten birds inhabiting this spot.

Although I made a long excursion inland, I did not again meet with this Warbler. Herr von Thanner remarks that "they are found everywhere on the south coast," yet I should say that if this is the case they are decidedly scarce. I saw none in the Barranco de Mogan. Mr. Ogilvie-Grant saw two examples of the Sardinian Warbler in Madeira, where its curious flight attracted his attention.

Mr. Meade-Waldo, who spent several winters in the Canary Islands, tells me that this Warbler is extremely common in Tenerife as well as in several of the other islands in the group which he has visited. It is strange that the bird was so scarce in Gran Canaria.

Sylvia conspicillata bella. Spectacled Warbler.

Sylvia conspicillata bella Tschusi, Orn. Monatsb. 1901, p. 130 *; Thanner, Orn. Jahrb. xxi. p. 91 (1910); Hartert, Vög. Pal. Faun. i. p. 599 (1910).

a. ? Las Palmas. 30th Dec. '08.

b. Las Palmas. 7th Jan. '09.

c. Las Palmas. 2nd April '09.

d. Confital Bay (sea-level). 4th Feb. '12.

e, f. Barranco de San Lorenzo. 16th Feb. '12.

Iris light brown; bill horn-coloured; feet yellowish flesh-coloured.

"Upper side very similar to *S. conspicillata*, but darker grey head, browner back, and more chestnut primary-coverts."

Examples from Gran Canaria are obviously darker than *Sylvia conspicillata*, of which I have examined a small series from the type locality, Sardinia.

On comparing an adult bird from Madeira (the type locality of *Sylvia c. bella*) killed in February with one of my birds from Gran Canaria obtained in the same month, I find that the Madeiran bird is slightly darker even than Gran Canaria specimens. It would be interesting to compare a large series from these two islands.

Spectacled Warblers are found in the island throughout the year. They seem to prefer the low-lying barren ground and hottest valleys to the more cultivated districts. They may always be seen on the waste land behind the Catalina, frequenting the Euphorbias and other small bushes which cover the sides of the barrancos. They are shy little birds, and when once alarmed fly some distance to a thick shrub from which they are particularly hard to dislodge; their cry is unmistakably that of a Warbler, and when frightened they begin a peculiar chattering and scolding. I did not see any in the neighbourhood of the Pinar.

Phylloscopus rufus canariensis. Canarian Chiffchaff.

Phyllopneuste rufa canariensis Hartwig, J. f. O. 1886, p. 486 *.

Phylloscopus fortunatus Tristram, Ibis, 1889, p. 21.

Phylloscopus rufus canariensis Hartert, Nov. Zool. 1901, p. 32.

Phylloscopus collybita canariensis Thanner, Orn. Jahrb. xxi. p. 91 (1910) ; Hartert, Vög. Pal. Faun. i. p. 504 (1910).

a. ♀. Santa Brigida. 4th Jan. '09. Wing 55 mm.

b. ♂. Las Palmas. 6th Feb. '12. Wing 48 mm.

c. ? Las Palmas. 12th Feb. '12.

d. ♂. Las Palmas (Alcaravaneras). 16th Feb. '12. Wing 52 mm.

e. The "Charco," Maspalomas. 24th Feb. '12. Wing 53 mm.

Bill—upper mandible dark horn-brown, lower lighter ; iris and feet dark brown.

The Chiffchaff of the Canary Islands is distinguished from *P. rufus* by its smaller size, darker colouring throughout, and the very different wing-formula, the wing being shorter and more rounded than in the European species. The 2nd primary is extremely short, shorter than even the 8th. The 4th and 5th primaries are the longest, the 3rd and 6th are approximately equal in length. Wing-measurements are given opposite the individual examples obtained.

This is perhaps the commonest bird in the Canaries. Found throughout the island, it is extremely tame, nesting freely in the gardens and woods. Herr von Thanner (Orn. Jahrb. xxi. p. 95) mentions that "there are no Chiffchaffs in the Pinar." In this he is mistaken, as I have myself shot specimens above the Cueva de las Ninas and have often both heard and seen them in every part of the Pine Forest which I have traversed. The Chiffchaff breeds very early in Gran Canaria. A pair were nesting under the eaves of a cottage near Santa Brigida, and the little birds made free use of large pieces of cotton-wool which were placed for them.

In 1910 one pair built in a small fir-tree in a private garden ; this nest was almost completed on February 2nd and

had four eggs on the 14th of that month. Another nest in the same garden contained only one egg on February 19th, but by the 27th of the month four eggs were laid.

On March 14th of the same year I found a Chiffchaff's nest built on the ground: it was placed at the foot of a small bush in an exposed position; the nest was composed of grass and lined thickly with feathers and harmonised perfectly with the dead grass around. It contained four eggs. Dr. Tristram never heard of a nest placed on or near the ground, those which he found were almost always in the crowns of palm-trees and once in a laurel-tree. The colouring of the eggs of this species varies considerably, the red spots differing in size to a great extent. In one clutch which I took the spots were very minute and numerous, predominating at the larger end, and in another clutch were much larger and more scanty.

Von Thanner mentions having procured Chiffchaffs here which had "light plumage and pale yellow tail-feathers." At the time of my visit to this spot in February 1912, Chiffchaffs were remarkably scarce. The only specimen that I procured here certainly did not shew any marked differences from those obtained in the north of the island. At the beginning of June of this year Chiffchaffs appeared more plentiful in the private gardens of Las Palmas than I had ever noticed them.

Lanius excubitor koenigi. Koenig's Grey Shrike.

Lanius excubitor koenigi Hartert, Nov. Zool. p. 309 & p. 323* (1901); Thanner, Orn. Jahrb. xxi. p. 91 (1910).

a, *b*. ♂ ♂. Between Aguimes and Tirajana. 8th April, '09.

c, *d*. ♀. Cueva de las Ninas. 760 metres. 24th Jan. '10.

e. ♂(?). Cueva de las Ninas. 3200 ft. 9th Feb. '11.

Bill black; iris reddish brown, pupil blue; feet black.

Total length in the flesh 9·4 inches; expanse of wings 12·6 inches.

This Shrike is most nearly allied to *Lanius excubitor algeriensis* from Algeria and *Lanius excubitor dodsoni* from Morocco.

Examples from Gran Canaria of *Lanius e. koenigi* have

(1) the upper parts similar to *L. e. dodsoni*, but darker than *L. e. algeriensis*;
(2) the under parts similar to *L. e. algeriensis*, but lighter than *L. e. dodsoni*.

A resident species, the Grey Shrike is the most locally distributed of any bird found in the island. It is entirely absent from the north of Gran Canaria. As I travelled south, Shrikes were first met with after the town of Aguimes had been passed, and along the main road to Tirajana they were by no means rare. In these southern villages they largely frequent the almond-groves, perching on the topmost branch, from which they give forth their musical whistle. They are not found on the Cumbres, but after descending on the southern side they become quite plentiful; near the Cueva de las Ninas (on the edge of the Pinar) they were found up to 2280 ft. I expected to meet with this Shrike on the desert-like country between Carrisal and Maspalomas, but only saw a single example in a Euphorbia-bush near Juan Grande. Another pair, however, frequented the sandy ground in the neighbourhood of the "Charco" at Maspalomas. Further round the coast in the Barranco de Mogan I came across several pairs. On the 8th April (1909) I discovered a nest, containing five fully fledged young, placed in the centre of a low bush on very stony ground. This nest was situated within a few yards of the main road between Aguimes and Terajana. Three of the young birds I brought away, hoping to keep them alive, but in this, I am sorry to say, I failed.

Mr. Meade-Waldo found the number of eggs laid to vary from four to six in a clutch.

Sandy-coloured examples of this Shrike are occasionally met with.

Parus cæruleus teneriffæ. Tenerife Blue Tit.

Parus cæruleus teneriffæ Hartert, Vög. Pal. Faun. p. 350 (1910); Thanner, Orn. Jahrb. xxi. p. 91 (1910).

a, b. ♂ ♀. Santa Brigida. 4th Jan. '09.

c. ? San Matéo. Feb. '11.

d–g. ? Above San Matéo (2800 ft.). 10th and 11th Feb. '12.

Iris reddish brown; bill black; feet dark brown.

This pretty little Tit is found throughout the island, and is especially common in the Monte and just above San Matéo. It is plentiful in the south of the island, and frequents the Pinar, where I have seen it up to 4000 ft. in some numbers. It is a noisy little bird, and its note is often the only sound heard in the depth of the silent forest, as it moves in small parties from tree to tree. Occasionally it is found near Las Palmas, frequenting the thick vegetation in the gardens of the Santa Catalina Hotel.

The eggs laid are generally three to five in number.

Motacilla boarula canariensis. Canarian Grey Wagtail.

Motacilla boarula canariensis Hartert, Nov. Zool. 1901, p. 313 *; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

Motacilla boarula boarula Hartert, Vög. Pal. Faun. p. 298 (1910).

a. Above San Matéo, 4000 ft. 22nd Dec. '08.

b. Between San Matéo and Teror. 23rd Dec. '08.

c, d. ♂ ♀. Las Palmas. 20th Feb. '11.

Iris dark brown; bill black; feet dark brown. Total length in the flesh 7 inches; expanse of wings 9½ inches.

As I have not a series of adult birds in my own collection for comparison, I quote the following remarks of Dr. Hartert on this subspecies, *vide* Nov. Zool. 1901, p. 313:—"*Motacilla b. canariensis* stands between *M. b. boarula* and *M. b. schmitzi*. It is not so dark on the upper surface as the latter, the parts round the ear are not so black, but they are much darker than in typical European birds, the superciliary stripe and the stripe on the cheek are smaller. . . . . Mr. Meade-Waldo has already pointed out the superior

size of the Wagtails of the Canaries, but, unfortunately, he did not name them."

The Grey Wagtail is one of the most confiding birds imaginable. It is found plentifully throughout the entire island, a pair or more frequenting every esacia and pool of water. It appears equally at home in some hidden gorge in the mountains or walking fearlessly amongst the washer-women on the edge of the water-tanks. Its nest is often placed in the hole of a wall or house, and from three to six eggs are laid, usually of a brownish stone-colour. Mr. Meade-Waldo mentions that occasionally a clutch of brick-red eggs is laid, and not unfrequently one of pure white eggs.

Motacilla alba. White Wagtail.

a. ♀. Las Palmas. 13th Jan. '10.

The White Wagtail is a rare migrant in Gran Canaria. In the many months which I have spent in the island I have only met with it on five occasions :—

(1) A single bird seen on the field opposite the Metropole Hotel early in January (1910).
(2) A pair on the water-tanks past the golf-links (13th Jan. 1910).
(3) One bird seen on the Las Palmas cricket-ground (28th Feb. 1911).
(4) A fine adult bird on a wall near the Port Road (middle of February 1912).
(5) A pair reported as seen frequenting a timber-yard in Las Palmas Harbour (February 1912).

From this it will be seen that stragglers are found in the island in January and February.

Anthus berthelotı. Berthelot's Pipit.

Anthus berthelotii Bolle, J. f. O. 1862, p. 357 * ; Ibis, 1863, p. 343.

Anthus berthelotii berthelotii Thanner, Orn. Jahrb. xxi. p. 93 (1910).

a. Above San Matéo, 2500 ft. 22nd Dec. '08.

b, c. Cumbres, above San Matéo. 5300 ft. 22nd Dec. '08.

d. ♀. Las Palmas, sea-level. 7th Jan. '11.
e. ♀. Las Palmas. 21st Feb. '11.
f. ♂. Santa Brigida, 1580 ft. 23rd Feb. '11.

Iris brown; bill horn- or yellowish horn-coloured; legs light flesh-coloured. Total length in the flesh 5·6 inches.

Berthelot's Pipit is found from north to south of Gran Canaria, and is one of the tamest possible birds imaginable, hopping in front of people without the slightest fear. On the highest points of the Cumbres it is quite common, and I have procured specimens at 5300 ft., almost the highest ground in the island. It is generally seen singly or in pairs, and is particularly numerous on the Palmas golf-links, where the nests may be found in numbers. These little birds are remarkable for the antics with which they try to draw one from their nests if suddenly disturbed. While walking over the links on March 11th (1911) my attention was attracted by a Berthelot's Pipit, which suddenly appeared before me fluttering along the ground as if quite unable to fly, with an apparently broken wing. The little creature fluttered in and out of the Euphorbia for about fifteen yards, when it took to flight. I guessed it must have a nest close by, and the ruse to lead me away was marvellously enacted. I had not far to search, and found an extremely neat and cup-shaped nest placed in a slight depression on the ground at the very foot of an Euphorbia-bush; the nest was firmly wedged in amongst the branches of the Euphorbia and was composed on the outside of small dried twigs, then a thick layer of dried grass woven very tightly, and lined entirely with goats' hair.

The nest contained three eggs, having the ground-colour greenish brown, with a ring of darker brown round the larger end. The eggs were incubated about seven days. This was on March 11th. Later in the month, on March 18th, I found two more nests placed in a hollow in the ground under the shelter of an upright stone; each contained two young in down.

The nestling is covered with dark grey down, the gape being brilliant light yellow in colour.

So far as I am aware no migration of this species takes place. A long description of the habits &c. of this interesting little Pipit will be found in 'The Ibis' for 1863, by Dr. Carl Bolle. Only on one occasion have I seen this bird perched on a tree: it being such an unusual occurrence, I promptly shot it to make sure of the identification.

Calandrella minor polatzeki. Polatzek's Short-toed Lark.

Calandrella pispoletta rufescens Hartert, Nov. Zool. 1901, p. 325.

Calandrella minor distincta Sassi, Orn. Jahrb. 1908, p. 30; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

Calandrella minor polatzeki Hartert, Vög. Pal. Faun. i. p. 217 (1910) *.

a. ♂. Between Las Palmas and Tirajana. April '09.

b–d. ♂. Las Palmas. 17th March '11.

e. Juv. Near Las Palmas. 18th March '11.

f. ♀. Telde Plains. 22nd Feb. '12.

g–h. ♀ et ? ♂. Plain between the "Charco" and Maspalomas. 25th Feb. '12.

Iris brown; bill horn-coloured; feet yellowish flesh-coloured.

Total length 5·2 inches; expanse of wings 10·4 inches.

The supposed form from Gran Canaria which Dr. Sassi has described under the name of *C. m. distincta* cannot possibly hold good. I have examined a large series at the Tring Museum from the Canary Islands, and find that the characters given are not constant.

As might be supposed, the Short-toed Lark of Gran Canaria is similar to the form found in Fuerteventura and Lanzarote, and differs very strikingly from the Teneriffe subspecies *C. m. rufescens*.

Polatzek's Short-toed Lark is locally distributed over the island. On the 16th and 17th of March (1911), a number of these birds appeared on the island, and large flocks were found on the golf-links, where two or three birds only are usually to be seen. They were scattered about

in small parties in company with Trumpeter Bullfinches, and did not seem to be paired. Hitherto I had only met with this Lark sparingly in the northern part of the island. The following day (March 18th), I met some boys who had just taken a young bird of this species from the nest. I tried to rear it, but in this I failed, and added it to my collection of skins (specimen *e*).

These Larks are far more plentiful on the extensive plains between Telde and Arguineguin than they are in the neighbourhood of Las Palmas.

Emberiza calandra. Corn-Bunting.

Emberiza calandra thanneri Tschusi, Orn. Jahrb. 1903, p. 162*; Thanner, Orn. Jahrb. xxi. p. 93 (1910).

a. ? Above San Matéo (4000 ft.). 22nd Dec. '08. Wing 102 mm.

b. ? Las Palmas (sea-level). 7th Jan. '09. Wing 97 mm.

c. ♀. Las Palmas (sea-level). 7th Jan. '11. Wing 86 mm.

d. ? Las Palmas (50 to 100 ft.). Jan. '11. Wing 89 mm.

e. ♂. Cumbres (Camp IV.) (5650 ft.). 12th Feb. '11. Wing 94 mm.

f. ♂. Cumbres (Camp IV.) (5650 ft.). 13th Feb. '11. Wing 98 mm.

g. ♀. Las Palmas (50 to 100 ft.). 31st Jan. '12. Wing 85 mm.

†*h*. ♂. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 87 mm.

i. ?. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 89 mm.

†*k*. ♂. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 90 mm.

†*l*. ♂. Between Las Palmas and Tamaraceite (100 ft.). 7th Feb. '12. Wing 87 mm.

m. ? Above San Matéo (2800 ft.). 10th Feb. '12. Wing 94 mm.

n. ♂. Above San Matéo (2800 ft.). 10th Feb. '12. Wing 96 mm.

o. ? Above San Matéo (2700 ft.). 11th Feb. '12. Wing 87 mm.

p. ♂. Above San Matéo (2600 ft.). 11th Feb. '12. Wing 95 mm.

q. ? Above San Matéo (2600 ft.). 16th Feb. '12. Wing 93 mm.

r. ? Plateau above Las Palmas (100 ft.). 15th Feb. '12. Wing 86 mm.

s. ? Plateau above Las Palmas (100 ft.). 15th Feb. '12. Wing 87 mm.

t. ♀. Maspalomas Village. 25th Feb. '12. Wing 87 mm.

†*u*. ♀. Maspalomas Village. 25th Feb. '12. Wing 86 mm.

Iris dark; bill—upper mandible horn-coloured, lower mandible yellowish; feet yellow.

The remarkable difference in size between examples of the Corn-Buntings which I obtained in Gran Canaria led me to suppose that there might be two distinct forms inhabiting the island, a resident *E. c. thanneri* and a migratory race. I therefore collected a fair series from different parts of the island, and my supposition was strengthened by finding that all examples (with one exception) shot on the high ground had a wing-measurement of 93–102 mm., whereas those from the coast-line were considerably smaller, with a wing-measurement of 85–90 mm. The latter, without exception, all appeared to have much lighter under parts than those from the hills.

The Hon. Walter Rothschild and Dr. Hartert very kindly invited me to the Tring Museum, where the ample series placed at my disposal soon convinced me that my Gran Canaria birds all belonged to the same race. Dr. Hartert has made a further examination of the series, and for this I am deeply indebted to him. He is of opinion that the size

† Dr. Hartert is of opinion that the sex in specimens *h*, *k*, *l*, and *u* has been wrongly determined. Certainly the measurements of these examples point to their being females, but as I did not dissect them myself I cannot disprove this.

depends on sex, and believes that four specimens in my collection labelled males are in reality females. If this is the case, it will be seen that the wing-measurement of males varies from 93 to 102 mm., and of females from 85 to 90 mm. Again, the birds obtained on the high ground had more yellowish under parts and the spotting on the breast was considerably coarser.

That Corn-Buntings inhabiting the same island or country vary considerably in both colour and size is borne out by the large series in the Tring Museum.

Dr. Hartert has kindly sent me two birds from Sardinia which are so widely different in the markings of the breast, as also in the size of the wing, as to appear at first sight perfectly distinct species; others from Morocco and Algeria shew the same differences only to a lesser degree.

In the Orn. Jahrb. (1903) Dr. Tschusi separated the Canary Island form under the name *E. c. thanneri* on the ground that the markings were coarser and darker than in *E. calandra*. Dr. Lorenz has been good enough to send me the types of this subspecies from Vienna, which I have carefully compared with the large series at my disposal. I do not consider this form sufficiently distinct to be worthy of subspecific rank. As I have shown above, individuals from the same islands vary to such a large extent amongst themselves that it seems impossible to find any constant characters. The description which Dr. Tschusi gives applies to examples in my collection from San Matéo and elsewhere in the hills, but to none of the specimens obtained on the coast; moreover, it is equally applicable to many examples of *Emberiza* from Europe. Dr. Sassi is, I believe, of the same opinion as myself.

Corn-Buntings are found very plentifully in certain parts of Gran Canaria, especially in the neighbourhood of San Matéo. In February (1912) literally hundreds of these Buntings were to be found in the corn-fields above the village, and their rasping call resounded from every tree.

Early in February numerous small flocks used to frequent the ground between Las Palmas and the Port, and many were shot on the hillside behind the Santa Catalina Hotel. They are much more rare in the south of the island, but are sparsely distributed even to the most southerly points, where I have seen examples in the Barranco de Mogan and in the grain-fields of Maspalomas. Occasionally these birds wander to the Cumbres, and while encamped there at 5650 ft. I came across a large flock.

This is a resident species in the hills, but I believe that its numbers are augmented in February, although I have not actually observed migration taking place. Certainly at some seasons of the year it appears to be much more plentiful than at others.

Fringilla teydea polatzeki. (Plate XII.)

Fringilla teydea polatzeki Hartert, Orn. Monatsb. 1905, p. 164; Polatzek, Orn. Jahrb. 1909, p. 4; Thanner, Orn. Jahrb. xxi. p. 93 (1910); Bannerman, Ibis, April 1911, pp. 401–2.

a. ♂. Pinar between Cueva de las Ninas and Juncal, 900 metres. 24th Jan. '10.

b. ♀. Outskirts of Pinar, Cueva de las Ninas, 760 metres. 24th Jan. '10.

c–e. ♂ ♀ ♀. Above Juncal, 4000 ft. 6th Feb. '11.

f. ♂. Pinar above Cueva de las Ninas, 3200 ft. 10th Feb. '11.

g. ♂. Pinar above Cueva de las Ninas, 3700 ft. 10th Feb. '11.

h. ♀. Pinar above Juncal, 4000 ft. 11th Feb. '11.

Iris reddish brown; bill bluish horn-coloured; feet grey-brown with pinkish tinge or slate-coloured (specimen *a*).

Total length in flesh 7·2 inches; tip of wings to tip of tail 1·6 inches; expanse of wings 10·5 inches.

The two females shot on the 6th of February had the eggs in the ovary quite undeveloped.

Fringilla teydea polatzeki from Gran Canaria is distinguished from the resident species of Tenerife, *Fringilla teydea*, by the following marked characteristics :—

(1) The tips of the median and greater coverts are much *whiter* than in *F. teydea*, in which bird they are bluish grey. As Herr Polatzek rightly asserts, this characteristic is especially apparent in freshly killed specimens. After death this snow-white becomes more dull with a bluish tinge.

(2) The upper parts are the merest shade more ashy olive-grey than in *F. teydea*.

(3) The black band on the forehead is distinctly more pronounced in *F. t. polatzeki* than in *F. teydea*, which has hardly any indication of a frontal band at all.

(4) The bill is shorter, as can be seen from the following table :—

Fringilla teydea polatzeki.		*Fringilla teydea.*	
3 (♂).....	1·6 mm.	1 (♂).....	1·7 mm.
		1 (♂).....	1·8 mm.
1 (♀).....	1·6 mm.	3 (♀).....	1·75 mm.
2 (♀).....	1·5 mm.	1 (♀).....	1·7 mm.

(5) A considerable difference will be found in the measurements of the wings in the two forms.

The following measurements are given on the authority of Herr Von Thanner, who appears to have had an enormous series available from which to made his deductions (i. e., *F. teydea polatzeki* 76 skins, *F. teydea* 122 skins) :—

	Fringilla teydea polatzeki.	*Fringilla teydea.*
Largest wing ♂	97 mm.	107 mm.
Smallest wing ♂	90 mm.	96 mm.
Average wing ♂	94 mm.	101·2 mm.
Largest wing ♀	97 mm.	97 mm
Smallest wing ♀	85 mm.	80 mm.
Average wing ♀	87 mm.	91·7 mm.

The wing-measurements of three males and three females of *F. t. polatzeki* which I procured are ♂ 92, 93, 94 mm., ♀ 86, 88, 92 mm.

H. Grönvold del. West, Newman imp.

FRINGILLA TEYDEA POLATZEKI ♂ ♀

It was not until 1905, when Herr Polatzek by chance procured examples in the Pinar of Gran Canaria, that a Blue Chaffinch was known to inhabit this island. Until then the fact seems to have escaped the notice of all other naturalists who have travelled in Gran Canaria. The specimens which Herr Polatzek obtained were sent to Dr. Hartert at Tring Museum, who pronounced the bird to be a new subspecies of the well-known Blue Chaffinch (*Fringilla teydea*) of the neighbouring island of Teneriffe. As I intended visiting the island in 1908, Mr. Ogilvie-Grant asked me to try and procure specimens for the British Museum. On my arrival in the island in December, with this end in view, I made an expedition over the Cumbres to the Pinar above San Bartolomé, only to find the woods in that direction entirely devoid of bird-life. The following year I again spent some time searching in another direction, making Tirajana my headquarters, but again without result. In January (1910) I entered the Pinar Pajonal from the south, pitching my camp at the Cueva de las Ninas, and here at last I met with the object of my search, procuring both a male and female example. Having now discovered the region in which the Chaffinches were to be found, the next year I again crossed the Cumbres, entering the Pinar by way of Juncal, a tiny village on the outskirts of the forest. No sooner had I gained the pines than the presence of several Blue Chaffinches became evident to me, and in the course of my ride to my old camping-ground I procured two pairs and saw about a dozen more birds besides. This was in February, and afterwards I spent many more days encamped in the forest. Although I only obtained one other pair of this Finch, yet I had ample opportunity of gauging their numbers and noting their habits. Several more birds were seen, but I contented myself with the three pairs already obtained. If a certain other collector had done likewise instead of slaying seventy-six examples the previous year, this very beautiful and interesting bird would not now be in danger of extermination, which will undoubtedly take place if such wholesale

destruction is allowed to pass uncondemned. However, in this case, as well as in that of the unique Bullfinch (*Pyrrhula murina*) of the Azores, the warning has, I fear, come too late, and, as the same collector is responsible for the butchery of both species, I sincerely hope that some means may be found to put a stop to such indiscriminate ravages in the future.

The Pinar Pajonal (Plate X. fig. 2), to which these Chaffinches are exclusively confined, covers a considerable area, as can be seen from the map (Plate IX.). Their distribution even in this limited space appears decidedly local, and they are certainly more plentiful in the Pinar above Juncal than near the Cueva de las Ninas. That they move about in the forest seems evident: on one day ten or more birds may be seen in a certain part of the pine-wood, whereas for a week none will be seen at all, when they will suddenly reappear in the same spot. Occasionally single birds—generally males—are to be met with in some remote part of the forest, and no amount of searching would produce another. Herr von Thanner mentions that he found these Chaffinches most plentiful wherever there was sufficient moisture and where the undergrowth was densest; he noticed that they were particularly fond of the seeds of *Stellaria media*. Unlike its neighbour in Tenerife, the bird found in Gran Canaria is remarkably quiet: one would sit for a considerable time on a bough without uttering a sound, presently it would fly as silently to the ground and commence searching diligently amongst the fallen pine-needles. The call-note, when uttered, was very low, much weaker than that of the Tenerife bird. Herr von Thanner actually mistook its cry for that of the Chiffchaff! Very little appears to be known as to the nesting-habits; it probably begins to build in May, and lays its eggs late in that month. Von Thanner thought that it probably commenced laying earlier than the species in Tenerife, owing to the lower altitude at which it is found, but I doubt if this be the case. The Blue Chaffinch was known to the few forest guardias and

goatherds in the Pinar, but outside this radius no one seems to have ever heard of it. The Woodpecker, on the other hand, although it inhabits the same area, is known all over the island.

The differentiation which has taken place between the two forms *F. teydea* and *F. t. polatzeki* is very curious, more especially as both birds are living under practically the same conditions and on two islands separated by only thirty-one miles of sea. I sincerely hope that this interesting subspecies may henceforth be allowed to increase in peace, as it undoubtedly will if unmolested by man, and it is aided by the additional fact that Sparrow-Hawks are practically unknown in the pine-forests of Gran Canaria.

Fringilla canariensis. Gran Canarian Chaffinch.

Fringilla canariensis canariensis Hartert, Nov. Zool. 1901, p. 324.

Fringilla cœlebs canariensis Thanner, Orn. Jahrb. xxi. p. 93 (1910); Hartert, Vög. Pal. Faun. i. p. 128 (1910).

a, b. ♂ ♀. Santa Brigida. 4th Jan. '09.

c, d. ♂. Santa Brigida. 8th Feb. '10.

e. ♂. Hoya Bravo. 22nd Feb. '11.

f. ♂. Santa Brigida. 22nd Feb. '11.

g–i. ♂ ♂ ♀. Above San Matéo, 2800 ft. 10th Feb. '12.

k. ♂. Above San Matéo, 2800 ft. 11th Feb. '12.

Iris dark; bill bluish horn-coloured; feet brown or greyish black.

Total length 5·9 inches.

This Chaffinch is not nearly so numerous as its near ally in Madeira. In fact, unless anyone knows exactly where to go, he may pass weeks in Gran Canaria without meeting with a single example.

It is certainly more plentiful in the north of the island than in the south, being practically confined to the Monte and Vega Districts. Its favourite haunts are the secluded woods to be found at Teror, Hoya Bravo, and certain parts of the Monte between Santa Brigida and San Matéo, and especially in the laurel woods above the latter village,

which lies at 2500 ft. Von Thanner found it most plentiful at Moya, to the west of Teror.

In the south of Gran Canaria, as I have said, this Finch is particularly scarce, and I have never seen or heard a single example in the large tracts of pine-forests through which I have travelled. It is by no means shy, and can be watched as closely as our own form at home. The note of the male is very similar to that of *F. cœlebs*. The Chaffinch is resident in the island and breeds in suitable places.

In the neighbouring island of Tenerife it commences laying about 23rd of May. Mr. Meade-Waldo says that "Three eggs are the usual clutch, though four are often laid, and also very frequently only two!"

In examples from Gran Canaria the wing-measurements in males appear to be decidedly smaller than in birds from the other islands. Moreover, the black frontal band is less distinct.

The changes of plumage to which this Chaffinch is subject render it very difficult to make out a satisfactory key to the species found in the Canary group. Two examples in my collection, killed in February, have the mantle and back olive-brown, the feathers of the crown being also tipped with this colour.

Key to the Species of Fringilla *inhabiting the North Atlantic Islands.*

I. Upper parts uniform dark slate-grey ..... *F. palmæ.*
II. Upper parts parti-coloured.
a. Crown of head light slate-grey, black frontal band very distinct.
*a*¹. Upper mantle olive-green, middle of back brownish grey ..... *F. maderensis.*
*b*¹. Entire mantle and back washed with olive-green ..... *F. moreleti.*
b. Crown of head glossy blue-black, frontal band indistinct ..... *F. canariensis.*

The scattered distribution of the various species of *Fringilla* in the North Atlantic islands has been commented on by almost every writer on this group.

Fringilla canariensis is confined to the islands of Gran Canaria, Tenerife, and Gomera.

Fringilla palmæ to the islands of Hierro and Palma.

Fringilla maderensis to Madeira.

Fringilla moreleti to the Azores.

Passer hispaniolensis. Spanish Sparrow.

Passer hispaniolensis hispaniolensis Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a, b. ♂ ♂. Between San Matéo and Teror. 23rd Dec. '08.

c–e. ♂ ♂ ♀. Las Palmas. 11th Feb. '10.

f. ♀. Las Palmas. 20th Feb. '11.

g. ♀. Las Palmas. 21st Feb. '11.

h, i. ♂ ♀. San Matéo (2500 ft.). 10th Feb. '12.

k. ♂. Maspalomas Village. 25th Feb. '12.

Female. Iris light brown; bill yellowish horn-coloured; feet light brown.

Total length in the flesh 5·2 to ·6 inches; expanse of wings 9·3 inches.

This Sparrow seems to be increasing in numbers every year; it is found in town and country, and huge flocks may be seen on the cultivated land. In the early mornings the noise which these Sparrows make in the palms and Eucalyptus-trees is enough to wake the soundest sleeper. In habits they are even more aggressive than *P. domesticus*, and have completely "ousted" the weaker Sulphur-throated Rock-Sparrow from the neighbourhood of Las Palmas—at any rate, so far as nesting is concerned. They have absolutely no fear, and will build even inside the house if a suitable grating is available for their needs. They are very partial to the date-palm, and the fruit is in consequence never allowed to ripen. In this tree they build their nests in profusion, although they also choose the eaves of houses and verandas. Building operations commence in March, and the nest is a most untidy structure, as can be imagined. One which I examined on the 15th of March (1911), built inside a ventilation-grating in a much-frequented room, was composed of thin twigs and grass loosely woven together.

It was lined with grass and no feathers were used, although many pigeons and poultry are kept close by. The nest was a domed structure and, as I have mentioned, was very large. On this date (15th March) it contained only two eggs, the ground-colour bluish green, closely spotted with dark brown, the spots becoming united at the thick end into irregular blotches.

The plumage of the male entirely changes in January before the breeding-season commences, and when this change is completed he is one of the most handsome birds to be seen. The head becomes rich chocolate-colour and the black centres to the feathers on the back and mantle become very intense. The under parts undergo the most complete change, the throat becoming dead black and reaching on to the breast, the feathers of which are tipped with white. The cheeks and a large ear-patch change from a dirty buff colour to pure white, the breast likewise becomes white, and the feathers of the sides and flanks deep black edged with buff, giving the bird a most conspicuous appearance. By the 10th of February, and in some cases earlier, this change of plumage has completely taken place. The females, apart from becoming generally brighter in colour throughout, shew no very marked difference.

Petronia petronia madeirensis. Yellow-throated Rock-Sparrow.

Petronia petronia madeirensis Erlanger, J. f. O. 1899, p. 482 *; Hartert, Vög. Pal. Faun. i. p. 141 (1910).

Petronia petronia maderensis Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a. ♂. Aguimes Road. 8th April '09.

b, c. ♀ ♀. Santa Brigida. 22nd Feb. '11.

Iris light brown; bill horn-coloured, lower mandible yellow; feet brown. Total length in the flesh 5·9 inches.

I have compared a series of this Rock-Sparrow obtained in the Canary Islands with typical examples of *Petronia petronia*. I find that examples from the Canary Islands have the under parts more grey-brown and the upper parts

darker throughout. There appeared to be no difference whatever in the size of the wings.

The Rock-Sparrow is very locally distributed in Gran Canaria; it frequents the dry rocky ground overgrown with Euphorbia and Cactus. Large flocks are always to be found in the Barranco Séco between Las Palmas and Tafira, and many are usually seen there, dusting themselves on the main road. In the town of Las Palmas it has been entirely supplanted by the Spanish Sparrow, though occasionally a large flock wanders down below the golf-links. In the villages in the Monte it is found nesting under the eaves of the houses, and on the road to Aguimes large flocks are always to be seen.

Serinus canarius. Canary.

Serinus canaria canaria Hartert, Vög. Pal. Faun. i. p. 84 (1910).

a. Near Santa Brigida, 5000 ft. 22nd Dec. '08.

b, *c*. ♀ et ? Santa Brigida. 4th Jan. '09.

d. ♂. Tirajana, 2700 ft. 9th April '09.

e–h. ♂ ♀. Cumbres (camp 4), 5650 ft. 13th Feb. '11.

i. ♂. Charco, Maspalomas, sea-level. 23rd Feb. '12.

k. Charco, Maspalomas, sea-level. 28th Feb. '12.

Iris dark; bill dark or light horn-coloured; feet brown.

Total length in the flesh 4·9–5·4 inches; expanse of wings 8·7 inches.

The Common "Canary" is very plentiful indeed all over the island, and is by no means confined to the Monte, although it prefers the high ground. It sings gloriously in its wild state, and several may often be heard at the same time; it seems especially fond of the Eucalyptus-trees which line the road from below Santa Brigida to San Matéo.

I saw several at Juncal, 3600 ft. (just below the Pinar), and others again in the pines at the Cueva de las Ninas close to my camp. On the Cumbres the birds are more often seen in flocks; I met with them at 5000 ft., just below Roque Nublo, on Feb. 12th. On the following day, while

encamped actually in cloud (5600 ft.), I shot four birds out of a huge flock which I mistook in the mist for that of another species.

In the extreme south-west they are somewhat scarce. I shot two birds in the sand-hills at Maspalomas, not very far from the coast.

Erythrospiza githaginea amantum. Trumpeter Bullfinch.

Erythrospiza githaginea amantum Hartert, Vög. Pal. Faun. i. p. 89 (1910)*; Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a. ♂. Puerto Mogan. 25th Jan. '10.

b. ♂. "Alcaravaneras." 31st Jan. '11.

c–d. ♂ ♀. Las Palmas. 20th Feb. '11.

e. ♂. Las Palmas. 10th March '11.

f. ♀. Las Palmas. 6th Feb. '12.

Iris light brown; bill—(specimens *a–d*) salmon-pink, (specimen *e* breeding) bright coral-red; legs and feet yellowish light brown.

Total length in the flesh 5–5·2 inches; expanse of wings 9½ inches.

Examples from the Canary Islands differ from *E. githaginea* in having the back darker.

The Trumpeter Bullfinch is another very locally distributed species found in the island. It is a desert-loving form and prefers the most "dried-up" and arid ground. I first met with this bird near Telde, as I was driving along the main road through very parched country, on April 8th, 1909, and on January 25th of the following year I saw a few close to the beach in the Barranco de Mogan. In 1911 they became much more plentiful in the neighbourhood of the Las Palmas golf-links, and in February several small parties were seen behind the Catalina. A little later, on March 16th, numbers were scattered over the golf-links in small flocks; many were feeding on some newly sown land close by, and the males all appeared to be in brilliant breeding-plumage; they were

in company with Short-toed Larks, and the sudden influx of both these usually uncommon species was most noticeable.

The true home of this bird, as I discovered during my last expedition, is the desert tract which lies between Carrisal and Maspalomas. In this district I found it fairly plentiful, wandering over the plains in little parties of from ten to fifteen. It took very little notice of human beings, and I could ride within half a dozen yards of a flock before they would take to flight. It must breed here in very large numbers annually, although I was a little too early this year (1912) to find the eggs. The previous year, while searching the ground to the east of the golf-links on March 18th, I found a nest of this Bullfinch placed in a hollow cup in the ground under the shelter of a stone; it contained four eggs, the ground-colour of which was very light blue thinly spotted with chocolate, and with a cluster of chocolate markings at the thick end.

This entire nest was stolen shortly afterwards by the little Spanish boys, who seem to spend all their time searching for and destroying nests, eggs, and young birds of every species. In the neighbourhood of Las Palmas, at any rate, very few birds can rear their young in peace without molestation of some kind from these human pests. The boys are marvellously quick at finding nests, and their eyesight for detecting birds such as the "Thicknee" is little short of miraculous.

Acanthis cannabina nana. Brown Linnet.

Cannabina cannabina nana Tschusi, Orn. Monatsb. 1901, p. 130 *.

Acanthis cannabina meade-waldoi Hartert, Nov. Zool. 1901, p. 323.

Acanthis cannabina nana Hartert, Vög. Pal. Faun. i. p. 75 (1910); Thanner, Orn. Jahrb. xxi. p. 97 (1910).

a. ♂. Between San Matéo and Teror. 23rd Dec. '08.

b. ♀. Las Palmas. 30th Dec. '08.

c. ♀. Santa Brigida. 4th Jan. '09.

d. ♂. Monte. 16th Jan. '10.

e, f. ♂ ♀. Above San Matéo (2600 ft.). 10th Feb. '12.

g. Above San Matéo (2800 ft.). 11th Feb. '12.

Iris dark; bill dark greenish horn-coloured; feet brown.

A. c. nana is distinguished by its small size from the European species. Wing-measurements: ♂ (2) 76 mm., (2) 78 mm.; ♀ (2) 74 mm., (1) 75 mm.

Linnets are resident in the island, and may be seen frequenting the grain-fields in large flocks; they seemed particularly plentiful in 1912, and in February there were many hundreds in the fields above San Matéo. They are almost confined to the Monte and the Vega districts, in the south of the island they are rare. Breeding commences in March. The first nest of this species which I discovered was almost complete on March 8th; it was placed in a small fir-tree about twelve feet from the ground, and was composed of small fir-twigs lined with hair. The nest was empty, but on March 12th it contained four eggs, and another was laid between that date and March 14th, when I next visited the nest.

The eggs were bluish white faintly marked with purplish brown.

ACANTHIS CARDUELIS PARVA. Lesser Goldfinch.

Carduelis carduelis parva Tschusi, Orn. Monatsb. 1901, p. 131*; Thanner, Orn. Jahrb. xxi. p. 97 (1910).

Acanthis carduelis parva Hartert, Vög. Pal. Faun. i. p. 69 (1910).

Carduelis carduelis nana Hartert, Nov. Zool. 1901, p. 323.

a, b. ♂ ♀. Las Palmas. 5th April '09.

c. ♂. Tirajana. 9th April '09.

d–f. ♂ ♀. Above San Matéo (2800 ft.). 11 Feb. '12.

This is a small form of the European Goldfinch. Upper parts exceptionally dark.

Goldfinches are met with in some numbers in the Monte and Teror districts. They are never seen very far from cultivated land and at times are found close to Las Palmas. They are resident in Gran Canaria throughout the year, and Herr von Thanner found them breeding in some numbers

in Moya. Huge flocks were seen at San Matéo in February (1912), where they were feeding in the fields literally in hundreds. In the south I found them to be decidedly scarce.

The female shot on April 5th contained well-developed eggs in the ovary.

Corvus corax tingitanus. Raven.

Corvus corax tingitanus Irby, Ibis, 1874, p. 264 *.

Corvus corax canariensis Hartert & Kleinschm. Nov. Zool. 1901, pp. 45 & 326 ; Thanner, Orn. Jahrb. xxi. p. 91 (1910); Hartert, Vögel Pal. Faun. i. p. 6 (1910).

a. ? Between Aguimes and Tirajana. 8th April '09.

b. ♂. Between Juan Grande and Aguimes. 3rd March '12.

Messrs. Hartert and Kleinschmidt have, I consider, separated the Raven of the Canary Islands from *Corvus c. tingitanus* on somewhat slight grounds.

The following remarks on this subspecies appeared in the Nov. Zool. 1901, p. 326 :—

" We find that the form from the Canaries is distinguished from *C. c. tingitanus* . . . . by its beak, which is longer, straighter, and weaker (where it is equally strong it is longer, where it is equally long it is weaker), and by the edges of the feathers, which are more *Corax*-like and less closed. As a rule, but not always, the feathers of the throat are longer."

On comparing examples from Gran Canaria and Tenerife with the small series of *C. c. tingitanus* in the British Museum, it struck me that the bill in birds from Gran Canaria was, if anything, *heavier* than in examples of *C. c. tingitanus*. This appears to be in direct opposition to the conclusions which Dr. Hartert has arrived at. When a very much larger series from Gran Canaria is available some slight differences may possibly be found to be constant; but as the description of *C. c. canariensis* does not apply to my specimens from Gran Canaria, I prefer to unite these birds with *C. c. tingitanus*, the resident species on the N.W. coast of Africa.

Ravens are numerous in Gran Canaria, particularly in the south of the island near Maspalomas and Juan Grande, where I have seen as many as twenty at a time following the plough. In the Cumbres they are plentiful, and when we were encamped at 5000 ft. their hoarse croakings used to rouse us very early in the mornings as they flew over the tent. They breed in the most inaccessible cliffs, laying from three to six eggs. Specimen *a* had a huge nest placed on a ledge high up a sloping cliff close to the main road. This nest was almost completed on April 8th, but contained no eggs. In the north of the island they are not nearly so common. A pair frequent the cliffs on the north-west and can be seen wending their way every evening over the golf-links towards Guanarteme. They feed largely on carrion, and a dead mule or sheep is sure to attract some of these birds in company with the Vultures.

The following species, not mentioned in the foregoing list, have also occurred in Gran Canaria on migration, as given on the authority of Herr von Thanner:—

Alauda arvensis. Sky-Lark. Near Maspalomas, 25th Feb. and 3rd March. Two and six birds respectively.

Ruticilla phœnicura. Redstart. Pinar near Mogan, 27th March.

Chloris aurantiiventris. Greenfinch. Moya, 12th April.

While Herr Polatzek records *Merops apiaster* (the Common Bee-eater) as a "bird of passage."

Ducks and Waders have been recorded from time to time as having occurred in the "Charco" at Maspalomas. As long ago as 1857, Dr. Carl Bolle, writing in the 'Journal für Ornithologie' for that year, mentions among others the following species as having occurred in the island. I have given the names which Dr. Bolle employed verbatim, adding the English appellations:—

Himantopus melanopterus Temm. Black-winged Stilt. (Maspalomas.)

Totanus calidris Bechst. Redshank.
Ardea minuta Linn. Little Bittern.
**Platalea leucorodios* Keys. Spoonbill. (Arguineguin.)
Phœnicopterus antiquorum Temm. Flamingo. ("Charco," Maspalomas.)
Fuligula nyroca Keys. et Blas. (Isleta.)
Fuligula nigra Degl. Common Scoter. (Canaria.)
Uria troile Lath. Common Guillemot. (Canaria.)
Alca minor Briss. Little Auk. (Canaria.)

XXIX.—*Notes on* Licmetis pastinator (*Western Long-billed Cockatoo*) †. By Thomas Carter, M.B.O.U. (Wensleydale, Broome Hill, Western Australia).

(Text-figures 11 & 12.)

As this fine bird has, for some reason, quite disappeared from the districts where it formerly abounded, and seems to be nearing extinction, I send the following notes upon it and its present distribution. Of its life-history and habits hardly anything appears to have been written in existing ornithological literature.

Gould, in his 'Handbook,' describes "the lores and bases of the feathers of the head and front of neck" as being *scarlet*, while Mr. A. G. North, in his Australian Museum, Sydney, Special Catalogue No. I. ('Nests and Eggs of Birds found Breeding in Australia and Tasmania'), gives salmon-colour for these parts, which agrees with the coloration of my series of skins, excepting that the lores and facial feathers in them are distinctly *orange* or orange-scarlet. Gould also states that the naked space round the eye is greenish blue, but in all the birds examined by me, both alive and immediately after death, this bare skin was of a blue colour, varying from a dull leaden shade to almost

* In the Museum at Las Palmas there is a Spoonbill labelled "Puerto de Luz, 21 Oct. 1880."

† See Campbell, 'Nests and Eggs of Australian Birds,' p. 620.